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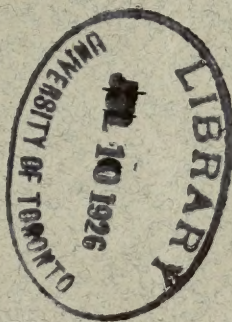
1925

Biological
& Medical
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ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
OF THE
PROVINCE of ALBERTA
FOR THE YEAR
1925

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY



EDMONTON:
PRINTED BY W. D. McLEAN, ACTING KING'S PRINTER
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DEPARTMENT OF AGRICULTURE, EDMONTON.

TO HIS HONOUR

WILLIAM EGBERT

Lieutenant Governor of the Province of Alberta

SIR,—

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1925.

I have the honour to be, Sir,

Your obedient servant,

GEORGE HOADLEY,

Minister of Agriculture.

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- Report of the Publicity Commissioner.
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DEPARTMENT OF AGRICULTURE

Heads of Branches

1926

Hon. George Hoadley, Minister of Agriculture.

H. A. Craig, Deputy Minister and Superintendent of Agriculture
Schools.

Z. McIlmoyle, Assistant Deputy Minister.

S. G. Carlyle, Live Stock Commissioner, Brand Recorder and
Superintendent of Fairs and Institutes.

C. P. Marker, Dairy Commissioner.

P. R. Talbot, V.S., Provincial Veterinarian.

W. J. Stephen, Field Crops Commissioner.

J. H. Hare, Superintendent of Poultry Branch.

D. Douglas, Director of Demonstration Farms.

B. Lawton, Game and Fire Commissioner.

Miss Jessie McMillan, Director of Women's Home Bureau Service.

Colin G. Groff, Publicity Commissioner and Editor of Publications.

Report of the Deputy Minister

HONOURABLE GEORGE HOADLEY,

Minister of Agriculture.

SIR,—

In reviewing the agricultural situation in the Province for the past year it is encouraging to note the evidences of returning prosperity. The crop year was, in some respects, one of the best we have had in this Province. The harvest and threshing weather was somewhat unfavorable, with the result that a considerable amount of grain was lowered in quality, yet a fair average yield combined with a good price brought a greater actual return to the farmers of the Province than from any previous crop. Our wheat, which averaged eighteen bushels on an acreage of five million seven hundred thousand acres, produced approximately one hundred and three million bushels. Our coarse grains also gave an average yield. Based on a fair market price for all of these grains, the value of our total grain production for 1925 amounts to \$148,500,000. Our fodder crop, such as green feed, hay, clover, alfalfa, corn, root crops, etc., have a total value of approximately \$5,500,000.

The dairy industry did not make the advance this year which was anticipated. During the past few years rapid progress has been made in the production of creamery butter. In 1924 about twenty-two million pounds were produced. Last year this production dropped to a little over nineteen million pounds. There are two good reasons why there was a decrease. First because of the prospect of a good wheat crop which always results in the dairy cow being somewhat neglected. In addition to this the month of July was exceedingly dry which affected the pastures and consequently the flow of milk. It is interesting to note, however, that the increase in price last year practically made up for any decrease in output. The total value of the dairy products for each of the last two years has been approximately twenty-three million dollars, including butter, cheese and whole milk products. Without doubt the industry will continue to develop rapidly.

HONEY.

The honey industry is making very rapid progress. One apiary in the Lethbridge district produced sixty-two thousand pounds of honey. The total production for the Province will amount to 115,000 pounds for the year.

A beekeepers' association has been organized with Lethbridge as headquarters. The beekeepers are scattered over the entire Province and number approximately 250. The southern part of the Province gives promise of becoming a large honey-producing

district. Large areas of alfalfa and sweet clover are grown which are the crops from which a good quality of honey is rapidly produced.

It would appear that our Province is particularly suited to the handling of bees, so much so that we have a number of inquiries from Eastern Canada and from the United States respecting locations for apiaries.

The value of our animal production including poultry, wool, furs, animals slaughtered and sold amounts to about \$34,000,000, making a grand total value of production in the Province of about \$256,000,000.

It is not intended to infer that these products were all sold and turned into cash. It is difficult to make an estimate of the actual cash returns. The above amount represents the total value of the agricultural production of the Province for the year. It is safe to say that the total cash returns from this year's operations are greater than in any previous year.

ACTIVITIES OF DEPARTMENT.

You are aware that the Department of Agriculture, in company with other department of the government, has reduced its expenditures during the past three years. Notwithstanding this fact we have endeavored to maintain the standard of service in all the important branches.

SCHOOLS OF AGRICULTURE.

Three Schools of Agriculture are now operating—at Clareholm, Olds and Vermilion. We are able to report a total enrolment of three hundred and seventy-two which includes 69 British boys. This attendance is almost as large as when the six schools were in operation.

This is the second year in which classes for training British boys have been conducted. Most of the boys who were brought out a year ago have spent the summer on farms. The department has given them supervision during the summer and will continue to do so until they are finally established for themselves. This year's class is divided amongst the three schools, between twenty and twenty-five at each school.

A large share of the expenses of this training is borne by the Overseas Settlement Board, the department having entered into an agreement whereby a proportion of the cash outlay is borne by this Board.

BOYS' AND GIRLS' CLUB WORK.

Through the Schools of Agriculture, and also through the District Agriculturists located in different parts of the Province, work amongst boys and girls has been given special attention. This work has been conducted through School Fairs, Calf Clubs,

Swine Clubs, Dairy Competitions, etc. Eleven Swine Clubs have been operated, this work being carried on in conjunction with the Dominion Government and the two lines of railway. The provincial department looks after all the organizations and educational work and gives a small amount of financial assistance. The Federal department pays a substantial amount of prize money for Swine and Calf Club Fairs. The railway companies assist with transportation of competitors to the provincial shows, and also give free trips to the four winning competitors, two on each line of railway to the Toronto and Royal Shows.

SCHOOL FAIRS.

School fairs have continued to be a special activity of the department. We undertake to place a man in charge of each of seven districts in the Province. All the school fairs in the district come under the supervision of the Department of Agriculture.

Seeds were distributed free of charge to approximately 40,000 children, who grew the vegetables and grain on their own land, exhibiting them later. There were 107 fairs held.

This line of work reaches a large number of children and without question is having a strong influence in directing these children towards proper agricultural pursuits. The district agriculturists and some of the staff of the Schools of Agriculture give a portion of their time to this work during the summer.

DISTRICT AGRICULTURISTS.

We have been proceeding with this work rather slowly in comparison with some of the other provinces of Canada. There are seven men at work. These are located in parts of the Province where the department wishes to give attention to some particular activity. Mr. James Murray, located at Medicine Hat, has had rather outstanding success in connection with the production of fodder crops. The future of Southern Alberta is bound up very intimately with the production of these crops. It is not a country in which grain can be grown continuously; live stock must be kept on a larger scale on the ordinary farm if the fertility is to be maintained. This can only be done by the successful production of pasture and fodder crops to care for such animals. In the raising of corn and sweet clover particularly, there has been notable achievement. As a result of the successful production of these crops, what has been known as the dry area in Southern Alberta will yet be a country in which people can make a comfortable living. This year 70,000 acres of corn fodder were produced. This was accomplished to some considerable extent through the efforts of Mr. Murray and Mr. Freng, the representatives of the department located in these districts. Three years ago there were but 14,000 acres in corn in the Province. At the Corn Show held at Lethbridge and at the Provincial Seed Fair in Calgary we had exhibits of corn which would have been a credit to some of the States to the south. It is evident that the corn

producing area is gradually moving north, and that this crop will play a large part in the development of our agriculture in the next few years.

MARKETING.

During the year the Dairy, Live Stock, Poultry and Egg Pools, have all commenced operation. The department has given all the assistance it could, particularly by way of supplying information. From present prospects it would appear that all of these pools will give the farmer much needed relief in connection with the disposal of his products. Through an orderly system of marketing the farmer is bound to receive better returns. The principle of co-operation has undoubtedly taken hold of the people of this Province to such an extent that the pools now in operation give good promise of success.

An arrangement has been made whereby the Egg and Poultry Marketing Service of the Department will act as the selling agency for the Egg and Poultry Pool until such time as this organization is in a position to take over the business itself. When this time arrives it is the intention that the Egg and Poultry Marketing Service, which has been in operation for some years in the Province, will cease to exist, and that the pool will be given an opportunity to handle the entire business.

VETERINARY INVESTIGATION.

The provincial veterinarian has been giving most of his time during the year to investigations of animal diseases. Some valuable research is under way in connection with tuberculosis in cattle. This disease has caused tremendous loss to cattlemen in Canada, particularly in the past few years when some of our best herds have been decimated and sent to the shambles. The research council of Canada, under the direction of Dr. Tory, has actively undertaken research work covering the whole field of tuberculosis. A number of the best scientists at all of the universities in Canada are now engaged on a definite programme of carefully planned research, particularly with a view of finding some preventive measures for the control of this disease. This department and the medical faculty of the university with some of the medical men from the Provincial Hospital, Ponoka, are engaged on an exhaustive study of the use of certain vaccines. We have about 150 animals under test at the present time. It is somewhat early yet to make any statement as to the probable results. It is sufficient here to say that up to the present time they have had exceedingly encouraging results. Similar experiments are under way in Great Britain and the United States. I am pleased to say that our Province is experimenting along this line on a much more extensive scale than any of the others and should consequently be in a position to make a valuable contribution to the research findings in connection with this disease.

REGISTERED SEED.

This Province did not make as good a showing at the International Hay and Grain Show this year as in some of the previous years. This was to be expected, however, as our harvest and threshing weather was not conducive to the production of high class seed. Nevertheless we were successful in winning a number of good prizes in both wheat and oats; taking first and second in field peas, and practically all the prizes in timothy seed with the exception of the first place.

MARKETING PLANT.

The department continues to operate the seed cleaning and marketing plant at Edmonton. At the present time we have in the neighborhood of 60,000 bushels of registered seed in this plant being cleaned and marketed. The Registered Seed Growers' Association of the Province has been asked to take over this activity as soon as they feel that they are in a position to do so. This seed is finding a ready sale throughout our own Province and to some extent in all the other provinces of Canada.

BACON HOGS.

Notable progress has been made with the improvement of bacon hogs during the year. The number of select bacon hogs reaching the central markets has materially increased. Perhaps the greatest advance has been made with the general standard of hogs reaching these markets. A large proportion cannot yet be included in the select class. A notable improvement, however, can be seen in thick smooths, and it is encouraging to know that the packers of this Province adopted a new policy on the 1st of November by which thick smooth hogs are now sold on a quality basis. By this means the farmer who has made an honest effort to improve his hogs will be compensated to some extent for the effort he has made. Reports from the British markets go to show that the quality of our bacon has very greatly improved within the past two years, so much so that a considerable amount of our bacon is now ranking equally with the best Danish bacon. It would appear that the hog business is due for rapid increase in the Province, many additional sows having been bred this year.

ROYAL AND INTERNATIONAL.

The department again sent several carloads of live stock to Toronto and Chicago shows where our breeders won a large share of the good prizes. The department joined with the Federal government in defraying the shipping costs to these shows. Credit for the outstanding winner amongst these exhibits naturally goes to the Shorthorn bull from the Prince of Wales' ranch. This animal won Grand Championship at both Toronto Royal and Chicago International. The winnings of Mr. Davenport with his Percherons and Mr. Collicutt with his Herefords are also worthy of mention. Each of these exhibitors sent a carload of stock and

were successful in winning many firsts and championships. The value of advertising from such exhibits as these can scarcely be estimated. It is hoped that next year we will be able to send down even better exhibits than were sent this year.

GAME BRANCH.

During the year the department organized a fur marketing service for shippers from a distance. Consignments of fur have been coming forward regularly to this service. Sales have been held when sufficient fur is on hand to warrant the calling for tenders. At most of these sales the local fur dealers have been willing to bid freely, with the result that the shippers got the advantage of a competitive market.

SUGAR BEET FACTORY.

During the year a large sugar beet factory has been established at Raymond. The farmers in this area planted about 6,000 acres of beets. The growing season throughout was favorable with the result that there was a good yield. Bad weather was experienced during the harvesting period. An early snow fall and also comparatively early freeze-up caused a good deal of difficulty in harvesting the crop. In general the farmer and the sugar beet company are reasonably well satisfied with the first year's operations. The department, through its representative, Mr. O. S. Longman, who is located at Raymond, is giving all the assistance possible to the growers, particularly in assisting in looking after steady supply of labor. Prizes are given by the department for special competitions in the growing of sugar beet plots.

During the winter about 150 lambs are being fed experimentally on sugar beet pulp and other check feeds. It is our intention to follow up this experimental feeding work from year to year, and to extend it next year to feeding of steers.

Reports of the various branches are attached herewith, in which the activities of the department are outlined in detail.

Respectfully submitted,

H. A. CRAIG,

Deputy Minister.

Report of the Assistant Deputy Minister

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit herewith my report on grasshopper control work, movement of settlers from the dry areas of the Province, and the taking up of second homesteads.

GRASSHOPPER CONTROL WORK.

Although the early summer of 1925 was quite dry we did not have any serious trouble with grasshoppers in the southern or central parts of the Province. A small outbreak was reported from Pincher Creek district about May 20th. Supplies of bait were arranged for at once and the prompt action taken by the people of this district resulted in preventing loss of crops and the spreading of grasshoppers to surrounding territory.

Representatives of the department in the Lethbridge, Medicine Hat and Bindloss districts made careful surveys of their territory during the season and reports of outbreaks were promptly investigated. In some cases it was found necessary to issue small supplies of bait and in other cases it was found that the grasshoppers were of the harmless kind. The Municipal District of Carbon reported about June 20th that they were having trouble with grasshoppers. Supplies were forwarded to this district at once and the outbreak was soon controlled.

In the latter part of June, the secretary of Municipal District No. 393, Mr. Jas. Lees, of Amisk, reported that grasshoppers were appearing in dangerous numbers. Supplies were forwarded from Edmonton and measures taken at once by the council of this municipality to prevent any serious damage to crops.

The only serious outbreak of grasshoppers in 1925 occurred in the northern parts of the Province including the Grande Prairie, Spirit River, Waterhole, Bluesky and Peace River districts. Mr. A. R. Judson, district agriculturist at Grande Prairie, took charge of control work in these districts and did very effective work in organizing and directing this work. The following municipal districts all carried on control work.

Grande Prairie	-	No. 739
Bear Lake	-	No. 740
Spirit River	-	No. 829
Peace River	- -	No. 857
Fairview	- -	No. 858

The Department of Agriculture under the direction of Mr. Judson operated mixing stations in Local Improvement Districts Nos. 770, 771, 772 and arranged for supplies of bait in Local Improvement Districts Nos. 826, 828, 830 and 837.

Some loss of crops occurred which might have been prevented by better distribution of bait, but on the whole we had splendid co-operation from the municipal districts and the people in the unorganized districts with the result that much crop was saved that would otherwise have been lost. Control work in 1926 will not be serious in these districts, but no doubt a good deal of work will be necessary to finally eliminate this pest.

Some assistance was given to the British Columbia government in supplying material for control work in the Peace River block of that province.

It now appears that in 1926 grasshopper control work will not be necessary except in the Grande Prairie and Peace River districts and possibly at Fort Vermilion.

We have disposed of most of our supplies except arsenic of which we have quite a large quantity and for which there is no market at the present time.

The total expenditure on this work for the year was \$11,336.95. We collected \$43,958.50 on old accounts and from sale of material.

MOVEMENT OF SETTLERS FROM DRY AREAS.

During the year 1925 the movement of settlers from the dry areas was continued under agreement between the Dominion government, the C.N.R., the C.P.R. and the Provincial government.

In the first five months of the year, applications for assistance in moving were received in quite large numbers, but from June to October very few were received. From October until January 31st, the number of applications increased although the number received during this period was not so large as in the same period of 1924. A total of 644 families with 1114 cars of settlers' effects were moved during the year 1925. Quite a number of these people secured their new locations in the irrigated districts, but the majority moved to points along the C.P.R. lines from Lethbridge and Macleod to Calgary and to points on the C.P.R. and C.N.R. lines in districts north of Calgary.

From the commencement of this work until the end of 1925, 1,305 families and 2,216 carloads of settlers' effects have been moved from the dry areas.

Reports from these settlers indicate that practically all are doing well in their new locations and many of them are paying the debts incurred while farming in the dry district. Owing to improved farming conditions in districts outside the dry areas it has been increasingly hard to get farms for the settlers being

moved, as these people are not in a position to make any cash payment on the purchase of a farm and suitable farms that are for rent are now hard to get. These conditions have prevented many settlers from moving who otherwise would have done so.

SECOND HOMESTEADS.

Under the amendments to the Dominion Land Act which permits settlers from the dry areas to take up a second homestead we have investigated all applications for this privilege and during the year we issued certificates to eighty settlers.

These certificates are accepted by agents of Dominion lands outside the dry areas and on these certificates the quarter section which the settler wishes to secure is reserved for him until he supplies satisfactory proof to the Department of the Interior that he has no further interest in farm lands in the dry area. Upon this being done the settler is given entry for this land and is required to do the regular homestead duties before title is issued.

A considerable number of these second homesteads have been taken up in the district north west of Ponoka along the line of the Lacombe and North Western Railway.

Respectfully submitted,

Z. MCILMOYLE,

Assistant Deputy Minister.

Report of the Livestock Commissioner

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to present herewith the report of the Live Stock Branch for the year 1925.

The livestock industry is rapidly recovering from the low prices received since 1921. The breeders of all classes of stock are optimistic in regard to the future of their business. There is a good demand for good quality commercial stock and the prices are considerably better than a year ago. This is especially true of hogs and good steers. The purebred cattle business has not, as yet, come back to where we would like to see it, but with the higher prices of all commercial stock, it will not be long till the breeders of purebred cattle will also have a demand for their surplus stuff.

HORSES.

The demand for horses has been active throughout the spring and summer months. Some 15,166 horses were exported from this Province during 1925. A large number of these going to Ontario, Quebec and the Maritime Provinces, the remainder going principally to Saskatchewan. While the prices are still low, with the present demand, they are sure to be higher in the near future. There is a very limited number of good big horses. The large proportion of the horses shipped out being from 1,200 to 1,500 pounds. This weight is suitable for the farmers in the eastern provinces, but in order to get a ready sale they must be gentle and well broken. The eastern farmer will not take chances on the unbroken western horse, and I would urge upon the farmers and ranchers, who have horses for sale, by all means to have them broken if they wish to dispose of them on this market.

More interest is being taken in horse breeding, than there has been for some years past, some twenty stallions were clubbed under the Dominion Live Stock branch regulations. It is the opinion of stallion owners that there will be a real shortage of good breeding horses for 1926. As it takes five years to grow a horse, I would urge the farmers to breed a few of their best mares and thus supply horses for their own use. If the present export demand keeps up, as it is very likely to do, because in the eastern provinces very few colts have been raised in the last five or six years, there is likely to be a shortage in this Province.

There is a splendid demand for the well broken saddle horse and several good ones have been shipped out of the Province at



CHAMPIONS FROM ALBERTA--Champions at Toronto Royal Show, 1925.
Exhibited by E. A. Davenport, Acme, Alberta.

high prices. There is no trouble finding a market for a good well broken saddle horse. There has been a revived interest in the breeding of thoroughbred horses, especially in the southern part of the Province, where they have several good horses, including two owned by the Dominion government, which are kept for the use of farmers.

A number of Alberta breeders took advantage of the assistance given by the Dominion and Provincial Departments of Agriculture in making an exhibit at the Royal Show at Toronto. The names of those who exhibited horses are as follows:

A. E. Davenport, Acme	Percherons
Bar U Ranch, Pekisko	Percherons.
University of Alberta	Belgians and Clydesdales

Mr. Davenport was very successful, winning all the first prizes and all the championships on stallions. He also had grand champion female. The Bar U Ranch won second and third on the two stallions they exhibited. The University of Alberta secured second on their Belgian mare and fifth on Clydesdale filly. On the whole the showing was a creditable one and reflected a great deal of credit on the Alberta breeders.

BEEF CATTLE.

The price of breeding cattle is slightly higher than a year ago, but during the early snow storm in September, a great many farmers became anxious for the winter supply of feed and in some districts reduced their herds very materially. As soon as the weather changed and the snow disappeared there was a noticeable change in the reduced number of females shipped to market, and as the fall of 1925 has been particularly fine, no shortage of feed is anticipated. The farmers who fed cattle during the season of 1924 and 1925 did exceptionally well. Notwithstanding the cold winter, the steers made good gains, and the price realized in the spring was higher than most of the farmers expected. The Edmonton Feeding Company fed a large number, which they exported to the Old Country, realizing profitable returns. During the summer they were again on the market and have been the largest buyers and feeders of export steers. They have expanded their yards and are going into the business in a much larger way. They are in the market for any good cattle coming on either the Calgary or Edmonton yards, and in their feeding yards they keep constantly on hand around four thousand head. Large shipments are sent out from time to time as the market warrants. Mr. Wilson, agricultural products representative for Canada, in the Old Country, in his report, states that Canadian cattle are gaining a firm hold on the Old Country market, especially for feeders, as the farmers find them much superior to the Irish cattle and great progress has been made in this trade. If the farmers and breeders will breed a better quality of cattle and put them on the market in good condition, a good price will be obtained.

The Calgary Stocker and Feeder Show held another show and sale during the fall, which was an unqualified success. Owing to the heavy fall of snow previous to this show the cattle were not in as good bloom as they otherwise would have been, but there were a large number of exhibitors and the prices were satisfactory. Below is a list of some of the prize winners:

- First prize, Shorthorn carload, two years old, owner, Usher Bros.
 Second prize, Shorthorn carload, two years old, owner, C. Stewart.
- First prize, Shorthorn group, two years old, owner, Savage Bros.
 Second prize, Shorthorn group, two years old, owner, E. P. Ranch.
- First prize, Shorthorn group, yearlings, owner, J. L. Morrison.
 Second prize, Shorthorn group, yearlings, owner, J. Kinninmouth.
- First prize, Hereford carload, two years old, owner, W. Birney.
 Second prize, Hereford carload, two years old, owner Mrs. Robertson.
- First prize, Hereford carload, one year old, owner, Grotto Stock Farms.
- First prize, Hereford group, two years old, owner, W. R. McLellan.
 Second prize, Hereford group, two years old, owner, Mr. MacDonald.
- First prize, Hereford group, one year old, owner, Dr. Lee.
 Second prize, Hereford group, one year old, owner, E. Frodsham.
- First prize, Aberdeen-Angus carload, two years old, owner, Usher Bros.
 Second prize, Aberdeen-Angus carload, two years old, owner, W. C. Squires.
- First prize, Aberdeen-Angus carload, one year old, owner, E. Frodsham.
 Second prize, Aberdeen-Angus carload, one year old, owner, Parslow & Denoon.
- First prize, Aberdeen-Angus group, two years old, owner, E. Capers.
 Second prize, Aberdeen-Angus group, two years old, owner, A. MacDonald.
- First prize, Aberdeen-Angus group, one year old, owner, A. J. Gregory.
 Second prize, Aberdeen-Angus group, one year old, owner, E. Frodsham.
- First prize, mixed carload, two years old, owner, Usher Bros.
 Second prize, mixed carload, two years old, owner, J. L. Morrison.
- First prize, mixed carload, one year old, owner, E. Frodsham.
 Second prize, mixed carload, one year old, owner, J. L. Butler.
- First prize, mixed group, two years old, owner, M. Lind.
 Second prize, mixed group, two years old, owner, W. Deegan.
- First prize, mixed group, one year old, owner, E. Capers.
- First prize, mixed carload, three years old, owner, J. L. Walters.
 Second prize, mixed carload, three years old, owner, J. L. Walters.
- First prize, mixed group, three years old, owner, H. W. Rausch.
 Second prize, mixed group, three years old, owner, F. J. Hartell.

Special Prizes.

- Best carload Shorthorns, special, J. L. Walters.
 Best carload Herefords, special, Mrs. Robertson.
 Second best carload Herefords, special, Usher Bros.
 Grand champion carload, J. L. Walters.
 Reserve grand champion, Usher Bros.
 Grand champion group, Savage Bros.
 Reserve grand champion group, D. W. McLellan.

PURE-BRED CATTLE.

The demand for pure bred bulls has been considerably better than it has been for the past three years. There has not been a very heavy demand for females, but since the price of commercial cattle has improved, a good demand for females is confidently expected by the breeders in the near future. An exhibit was sent to the Toronto Royal and Chicago International exhibitions, in the fall of 1925, which made a wonderful showing. Cattle were shown from the herds of the University of Alberta, Frank Collicutt & Son, Crossfield; Boggs & Son, Daysland; the E. P. Ranch, and the C.P.R. Demonstration Farm. Mr. Collicutt exhibited twelve animals at the Royal and was successful in carrying off ten red ribbons and two championships. Boggs & Son were also successful in carrying away a large number of prizes and won first and champion on his bull. His Royal Highness exhibited just one animal, a Shorthorn bull, King of the Fairies. This bull was a grand champion at the Royal and also grand champion at the Chicago International.

There was a splendid showing of beef cattle, especially Shorthorns, at the summer fairs. Two herds from the United States and one from Ontario competing with Alberta herds. This was perhaps the best show of Shorthorns that has ever been held in this Province. The Herefords and Angus also made a good showing, but fewer herds were competing.

Below is a summary of the principal sales held at Calgary and Edmonton last year.

1925 SPRING BULL SALE AT EDMONTON.

Breed.	No. Entered	No. Sold	Amount Sold for	Average
Herefords	7	3	\$ 345.00	\$115.00
Shorthorns	58	48	6,018.00	125.16
Aberdeen-Angus	7	5	420.00	84.00
Holstein	11	6	640.00	106.66
Ayrshires	19	7	595.00	85.00
Totals	102	69	\$8,018.00	\$116.20

1925 BULL SALE AT CALGARY.

Breed.	No. Sold	Amount Sold for	Average
Shorthorns	194	\$24,080	\$124.12
Herefords	158	22,640	143.30
Angus	50	5,390	107.80
Other breeds	6	495	82.50
Totals	408	\$52,605	\$128.93

SUMMER CATTLE SALE, MAY 28TH AND 29TH, 1925.

Entered.		Average
13 Shorthorns sold for	\$1,100.00	\$ 84.61
11 Herefords, sold for	1,455.00	132.27
1 Holstein sold for	85.00	85.00
25 sold for	\$2,640.00	\$105.60

FALL STOCK SALES, CALGARY, NOV. 3RD TO 6TH.

Swine.

Entered.		Average
2	Yorkshire boars sold for	\$ 49.00 \$24.50
10	Berkshire females sold for	249.00 24.90
6	Berkshire boars sold for	102.00 17.00
1	Tamworth female, sold for	30.00 30.00
8	Tamworth boars, sold for	194.00 24.25
<hr/>		
27	sold for	\$624.00 \$23.11

Cattle.

Entered.		Average
34	Shorthorns, females, sold for	\$1,522.50 \$44.78
3	Shorthorn males sold for	120.00 40.00
3	Aberdeen-Angus females sold for	155.00 51.66
1	Aberdeen-Angus male sold for	25.00 25.00
1	Holstein female sold for	225.00 225.00
2	Holstein males sold for	65.00 32.50
<hr/>		
44	sold for	\$2,112.50 \$48.01

Sheep.

Entered.		Average
11	Shropshire ewes sold for	\$ 216.50 \$19.68
81	Shropshire rams sold for	1,957.00 24.16
2	Oxford ewes, sold for	43.00 21.50
103	Oxford rams sold for	2,241.50 21.76
3	Suffolk ewes, sold for	69.00 23.00
9	Suffolk rams sold for	164.50 18.28
32	Hampshire ewes sold for	723.00 22.60
13	Hampshire rams sold for	229.50 17.65
113	Grade ewes sold for	1,448.50 12.82
<hr/>		
367	sold for	\$7,092.50 \$19.33

Dressed Carcasses.

75	lambs sold for	\$ 912.53
50	hogs sold for	1,231.45

DAIRY CATTLE.

There has been a strong demand for good dairy cows. The farmers are realizing that it pays better to keep a few good cows than a larger number of poorer or medium ones. There was a decrease in the production of creamery butter, but this was no doubt due to a very dry period which extended over the central part of the Province, resulting in short and dry pastures which affected the supply of milk. The heavy fall of snow in the month of September over the central part of the Province also affected the flow of milk very materially. Owing to the high price of wheat and the very satisfactory prices obtained for pigs and lambs, it is doubtful if there will be any big increase in the numbers of dairy cattle in the immediate future, but the majority of the farmers realize that dairying is a safe line to follow and have decided to keep a few cows, at least.

There has been a good demand for pure bred dairy female stock especially during the end of the year, and at public sales

very good prices were realized. At the summer exhibitions there was a remarkable exhibit of dairy animals, especially Holsteins and Ayrshires. Several outside herds were brought in. Ayrshire herds showing from Quebec, Ontario, and British Columbia, and this was perhaps the best Ayrshire show that was ever held in this Province. The Ayrshire breeders are very active and are feeling very optimistic over the future of their breed in the west.

The Holstein made a good showing at all the A and B fairs in the Province, and the breeders of this Province held their own with the best herds from Ontario.

SHEEP.

The sheep breeders are still enjoying good prices and a splendid demand for their stock. A great many small flocks have been started in the Province during the past year and the farmers are beginning to realize that the keeping of sheep is one of the most profitable side lines that they can engage in.

There was a heavy lamb crop, both on the range and on farms and the prices of both wool and mutton, especially lamb, have been profitable to the rancher and farmer alike. There is little doubt but what the sheep industry will expand very fast in Alberta, as the climate and feed supply are both conducive to the production of high grade wool and excellent mutton.

There was a good demand for pure bred rams of good quality and prices were a little higher than preceding years. At the Calgary Sheep and Swine Sale, the outstanding animals went at a high figure, but the ordinary ram sold at rather a low price, which again proves that it pays to raise nothing but the best. The common bred and carelessly handled pure bred flock will not be a very profitable investment.

The feeding of lambs has become a profitable undertaking and perhaps more lambs were fed this year than ever before. With the splendid feeds we have in this Province, such as oats, barley, alfalfa and prairie hay for the feeding of lambs, this industry should be developed and no lambs marketed unless in a finished condition.

HOGS.

The price of hogs for the year 1925 has reached a high level. As predicted in our report of 1925, on account of so many sows being placed on the market, there would be a great reduction in the number of hogs produced, and we found that in the fall of 1925 there was an unprecedented demand for breeding stock. We find that the farmers are rushing into the hog business just as fast as they rushed out in the fall of 1924. This is rather a dangerous system and the farmer who is doing this is taking some chances, for if a large number of pigs are farrowed in the spring of 1926 and there should be a short crop of coarse grains or if for any reason these grains should become high in price and with the

number of hogs that will be placed on the market, the price of hogs is sure to be forced down, so that the farmer may again find himself in the same position as he was in in 1924, with rather a low price of hogs and high price of grain. If the farmers of this Province are going to make any headway in the production of bacon, it must be put on a more stable basis. The market for our surplus product is Great Britain, and they demand a good quality of bacon. Their market is steady. Our competitor is Denmark and they have a steady supply. The reputation for our Canadian bacon has gained very considerably the past couple of years and our best bacon is now equal to Denmarks, but if we are going to make an impression on this market we must not only have a high quality of bacon, but we must produce as nearly as possible the same amount every month in the year. Canadian packers have, up to the present time, been using borax as a preservative for export bacon. This enables them and also the wholesale men in the Old Country to hold the bacon when there is a surplus, and put it on the market as it can be absorbed, but the British ministry of agriculture has passed regulations that after the first of January, 1927, no preservative can be used, so that our bacon will have to be shipped direct and sold as soon as possible. The farmers of Canada would be well advised to meet this condition by placing on the market, as nearly as it can possible be done, a steady supply of hogs each month through the year.

A great deal of experimental work has been carried on in the feeding of minerals to hogs, both in the United States and Canada, and the results show clearly that a great saving in feed is affected by the proper feeding of minerals. In cases where skim milk is not available a small amount of tankage should be added to the ration. The Animal Husbandry Department of the University of Alberta is now carrying on some valuable experiments along this line, and it would be advisable for every farmer to keep in touch with this work and get copies of their latest bulletins.

STOCK INSPECTION.

We have at the present time permanent stock inspectors on the stockyards of Calgary, Edmonton, Moose Jaw and Winnipeg. The inspectors at Moose Jaw and Winnipeg only inspect the stock coming from Alberta, which have not been inspected by our inspectors in that Province. Four men are employed to do this work at the stockyards and packing plants in the city of Calgary, besides a bookkeeper in the office. Three men and a bookkeeper are employed in the Edmonton plants and stockyards. Besides these inspectors at the yards various inspectors are appointed throughout the Province, who receive so much per day and travelling expenses to inspect cattle going out of the Province that do not go through any of these yards. The men employed are all competent brand readers, so that the stock men of this Province are protected as far as possible from cattle rustlers. They are also protected against any mistakes which may be made by shipping, especially in the range districts in the fall of the year when

the hair is long on the animals and brands are not easily read by the men in charge of cattle. During the year there were 7,524 horses and 302,752 cattle inspected at the Calgary stockyards, and 4,087 horses and 226,584 cattle inspected at the Edmonton stockyards.

Respectfully submitted,

S. G. CARLYLE,

Live Stock Commissioner.

Annual Report of Boys' and Girls' Clubs for 1925

S. G. CARLYLE,

Live Stock Commissioner.

SIR,—

I herewith submit a report of the Girls' and Boys' Clubs for the term of office I have held in your department. I began my duties on May 1, 1925.

Swine clubs play the most prominent part in our boys' and girls' work. At the present time we have eleven swine clubs organized in the Province. They are as follows:

Club.	No. of Members.	No. of Gilts.	No. of Feeder Pigs.	Supervisor.
Grande Prairie	35	26	80	A. R. Judson
Vegreville	35	30	75	F. H. Newcombe
Sedgewick	22	16	61	H. W. Scott
Killam	23	18	68	H. W. Scott
Battle Bend	14	12	44	H. W. Scott
Alliance	22	16	65	H. W. Scott
Hardisty	21	18	72	H. W. Scott
Czar	19	17	66	H. W. Scott
Red Deer	22	17	65	L. B. Thomson
Sturgeon	28	22	82	L. B. Thomson
Olds	30	22	70	C. A. Weir
Totals	271	214	748	

CALF CLUBS.

Beef Calf Clubs.

Ranfurly	F. H. Newcombe
Vegreville	F. H. Newcombe

Dairy Calf Club.

Vegreville F. H. Newcombe

The above clubs were all organized before June 1st, by their respective supervisors.

All of the above clubs, with the exception of Olds Swine Club, held their annual Swine Club Fair, co-operating with the School Fair. All fairs held received the Provincial government and Dominion government grants, also grants from the Provincial government for judging competitions. In all cases keen interest was shown in the judging competitions. The keenness being due no doubt to the fact that a team of four was selected to represent the club at the annual Inter-Club Show Judging Competition.

INTER-CLUB SWINE SHOW.

The above show was held in Edmonton on November 5th and 6th, at the Edmonton stockyards, and the University of Alberta respectively. The following clubs shipped in hogs to the Edmonton show:

Grande Prairie	1 carload
Vegreville	1 carload
Sedgewick	1 carload
Alliance	1 carload
Sturgeon	1 carload
Hardisty, Czar	1 carload
Killam	1½ carload
Olds, Red Deer	1 carload

Due to the bad weather conditions and scarcity of feed in the fall, some of the club members in the Olds, Red Deer and Killam districts were unable to finish their pigs on time.

In the carlot competition Grande Prairie was first. The scores were as follows:

	Points.
Grande Prairie	88.5
Vegreville	77.5
Czar-Hardisty	73
Sturgeon	71.5
Sedgewick	71
Alliance	70
Red Deer-Olds	68.5
Killam	38.5

A class for individual pigs shown by swine club members was held. This prize money was donated by the different commission and packing firms. There were over 90 entries in this class and 35 placings were made. The first prize was won by a Yorkshire gilt raised by Henry Bjorkeland of Red Deer. The evening of the first day of the show, all swine members attending, numbering around 75, were entertained by the board of trade at a theatre party in the Pantages and Empire theatres.



WINNERS OF INTER-CLUB JUDGING CONTEST—Swine Show, 1925. Members of team: Roy McLay, Melburn McLay, L. Hodgins, of Sturgeon. Coach: L. B. Thompson.

The second day was confined to judging competitions and bacon hog demonstrations for the respective railway competitions. The judging competitions was won by the Sturgeon Swine Club. The railway competitions for the trip to the Toronto Royal on the C.P.R. and C.N.R. lines were won by Grande Prairie and Vegreville respectively.

A banquet was given to all swine club members at the Royal George Hotel by the Alberta Swine Breeders' Association. Prizes won at the show were presented, and I believe this tended a very fitting climax to the show.

While in Edmonton the members were shown over the different packing companies. On the first day of the show the Swift Canadian Co. entertained them at dinner and later showed them over the plant.

Advantage was taken of the swine show to distribute several of the bacon type Yorkshire gilts back to the club members. The carloads of hogs sold at good prices. All carloads received a 50c per 100 margin on the market price that day.

Respectfully submitted,

L. B. THOMPSON,

In Charge of Boys' and Girls' Clubs.

Reports of District Agriculturists

REPORT OF JAMES MURRAY, DISTRICT AGRICULTURIST, MEDICINE HAT

S. G. CARLYLE, ESQ.,
Livestock Commissioner.

SIR,—

I beg to present herewith a brief report of my work during the year 1925.

THE SEASON.

There was a considerably reduced acreage in crop in many parts of this district, to which a number of factors contributed. First the movement of several hundred families to points north or west left many farms unoccupied or with a greatly reduced acreage cropped by a tenant; the season of 1924 was so exceedingly dry that an acreage smaller than usual was prepared for crop by summer fallowing, and the shortage of seed and feed for work stock made it imperative that many farmers seed much less than they frequently do.

Spring moisture conditions in the surface soil was much better than usual due to a fairly heavy snowfall during the winter, and a heavy fall of snow late in April. Growing conditions continued favorable during May and most of June, except in a few districts where rainfall was deficient and cutworms prevalent. While some of the later seeded crop was an uneven stand most of the grain looked exceedingly promising until the last week in June when there started a spell of extremely hot weather that continued without a break for three weeks.

Crops of all kinds suffered severely. Winter rye was sufficiently well advanced to produce a fair yield, but too rapid ripening damaged the quality of the grain. Excellent stands of wheat, that promised before the heat wave to yield bountifully, gradually shrunk until the ultimate return was less than one-third of that expected earlier in the season. Even well prepared land in which some moisture had been carried over was unable to carry the crop without its shrinking greatly, but good cultivation and thin seeding had a marked advantage over slip-shod methods and heavy seeding.

Cooler weather and local showers helped the later grain to fill, and much of it produced a better sample than the earlier crop that was filling during the hot spell. Harvest was well under way by the 10th of August and was completed under favorable conditions.

During the harvest season very unfavorable weather was experienced after about half the crop in this part of the Province was threshed. Rain and snow alternately held up the operations for fully a month, resulting in a loss of from one to three grades in the threshed grain. The precipitation during September and October amounted to over four inches, and as most of it went into the land it should be of material benefit for next year's crop.

The favorable growing conditions during the early part of the season resulted in the production of a reasonably good supply of feed in most districts. There is a shortage in limited areas, but most farmers have sufficient to carry their stock through the winter. Year by year more attention is being paid to securing a supply of winter feed for stock. Land better prepared for the growing of a crop is being used for feed growing, and adapted crops in greater variety are being used.

CORN GROWING.

The work of previous years having shown the wide adaptability of the corn crop to this part of the Province, an effort has been made to get it more widely grown and more firmly established as a standard crop. The corn work has been carried on along several lines, viz:

(a) The dissemination of information on the value and uses of the crop, by means of bulletins, newspaper articles and farmers' meetings;

(b) Helping corn growers get a supply of good seed by putting them in touch with reliable sources of supply, and by shipping in good seed for re-sale;

(c) Extending to districts where corn has not previously been extensively grown the testing of four of our better known varieties, by furnishing seed in four pound lots of each kind to 20 farmers in widely separated districts;

(d) Supplying seed in lots of four pounds of one variety to 30 farmers to test its value in other districts where it had not previously been grown as a field crop;

(e) Testing eight varieties of corn little known in Alberta in comparison with those now commonly grown. These 12 varieties were grown on seven farms in widely separated districts.

(f) Helping corn growers in districts suitable for the growing of seed to properly save and cure their seed crop and to find a remunerative market for it;

(g) Promoting an interest in the showing of seed corn at fairs to show the possibilities of seed growing and to demonstrate the types most suitable to Alberta conditions.

The varieties used for most of the trials this year were North Western Dent, Quebec No. 28, Gehu, and Dakota White Flint, all of which have been successfully grown in Alberta for several years.

Where the crop was grown for fodder—not ripe grain—the North Western Dent was the most popular as it suckers less and has the ears borne high enough to permit its being cut with the corn binder. Quebec No. 28 is slightly later than the other two flint varieties, and has the ears borne higher. It was generally second choice for fodder. The ears of the other two varieties are quite close to the ground and they are no so popular for fodder except in cases where it is to be fed off in the field. For this they are unsurpassed.

In the seven tests where the 12 varieties were distributed, the four mentioned above were used, together with the following:

Dakota Gold	.....early flint	.....yellow
Minnesota No. 13	.....mid-late dent	.....yellow
Pioneer	.....early dent	.....white
Mandan White Flour	.....early flour	.....white
Shota	.....early flint	.....white
Ivory King	.....early flour	.....white
Square Deal	.....early dent	.....yellow
Falconer	.....early semi-dent	.....yellow

Of these varieties, Minnesota No. 13 showed up particularly well as a fodder corn. As an early strain of this variety was used it was well advanced toward maturity when frost came; the ears were borne well up from the ground and the yield of fodder was heavier than from any of the others. Pioneer White Dent, while smaller, was considerably earlier than the Minnesota No. 13, and promises to be a useful variety. This variety is practically the same as Rusler's White Dent.

Of the other varieties Falconer and Shota gave evidence of being better than the average, and might be grown to advantage.

With a crop as comparatively new to Alberta conditions as corn, it can readily be understood how many farmers have difficulty in fitting it in to their system of farming. Those who have farmed previously in the corn belt find that here, if they wish to mature it, they must grow an entirely different type of corn—one that ripens earlier and has the ears closer to the ground. For handling such corn, modern corn harvesting machinery is not well adapted and there is an aversion—not unreasonable—to resorting to primitive methods of harvesting. To overcome the harvesting difficulty the practice is becoming more general year by year of feeding off the corn in the field using cattle, hogs, sheep or horses. When the early varieties are used the stock can be turned into part of the field last in August before any of the grain fields are cleared, and part can be reserved for similar use during the early part of the winter after the stubble fields are cleared up. When hogs are to be used a patch should be grown inside a hog-proof fence, but for cattle and horses a temporary two strand fence is all that is required.

That part of the crop to be stored for winter use might better be of one of the larger varieties such as Northwestern Dent or an early strain of Minnesota No. 13, both of which carry the

ears high enough to permit a corn binder being used for harvesting. Any variety which will advance to the glazing stage by cutting time will make fodder or silage of first quality.

In the growing of corn in commercial quantities for seed we have not yet advanced far, due largely to the fact that special arrangements must be made for the complete and rapid curing of the corn after it is harvested. Even corn which is ripe when gathered and appears to be well dried out, still has enough moisture in the cob to induce moulding in a few days if it is stored in bulk. As soon as it is gathered it must either be hung up or put in curing racks in an airy place with a good air circulation. Artificial heat is sometimes necessary to carry off the moisture quickly.

To do this work at the season of the year when it must be done requires time and some expense for storage and corn growers are not likely to undertake it unless they have a reasonable prospect of a profit. There is a real need for men to make a business of growing seed corn in Alberta as headway that is made in growing the crop depends to a considerable extent on there being available acclimated seed of good varieties.

When the buyers of seed corn recognize the superiority of home grown seed and are willing to pay for this superior value, growers will be found to produce the seed. The experience of the last three years has shown that there are certain districts well suited on account of soil and climatic conditions for growing seed and in these districts this phase of corn growing has every prospect of developing.

The display of corn at the South Alberta Corn Fair held in Lethbridge in November, demonstrated that corn has a future of no mean importance in Alberta. One of the most hopeful features of the show was the wide distribution of the prize winning samples, coming from as far north as township 28 and distributed from the Saskatchewan boundary to range 25.

TRIALS OF OTHER CROPS.

Beans.—To further test the possibilities of bean growing seed was distributed in small samples to about three hundred and fifty farmers. Two small white varieties—Lady Washington and Luther Burbank and one brown, Alberta Brown—were used. The Alberta Brown being somewhat earlier was sent to most of those from the north making application.

Many of those getting samples failed to send in reports, but on those which were sent in good crops of ripe beans were reported in many cases. Some crops were lost on account of frost, but even from points as far north as Tofield good yields were reported. From the general tenor of the reports it would appear that the districts of lighter land in the south might grow beans with profit. This is also borne out by observation.

Soy Beans.—For several years occasional requests have been made for samples of soy beans for trial. This crop has been coming rapidly to the front within recent years in the northern states and in eastern Canada for both hay and grain.

Some seed of a very early variety—Quebec No. 92—was secured from Macdonald College and a few samples sent to interested farmers. Only in one case was seed ripened, but the others grew a good crop of forage that advanced to the podding stage before frost.

Soy beans are very tender to frost and make rather a heavy demand on the soil moisture so that it would not appear likely that they would soon become an important crop in either the south or the north.

Sorghum (Early Amber Sugar Cane).

Eighteen lots of this early variety of sorghum were distributed in almost as many districts. Some excellent crops were secured when it was planted in rows and kept cultivated. It suffered but little from the excessive heat in July and a number of the growers were quite enthusiastic about its possibilities.

It is however easily damaged by frost and in cool seasons makes but an indifferent growth. It may prove useful as a catch crop.

Sudan Grass.—The experience of 12 men who grew Sudan Grass this year would indicate that it may prove of value under the same conditions as sorghum to which it is closely related.

Broom Corn.—A number of trials were made in growing Broom Corn on both dry and irrigated land to see if it would be possible to grow here the broom that is now imported by the broom manufacturing companies. What appeared to be good crops of broom were grown on both dry and irrigated land and samples sent to a broom company in Regina. Their report was not very favorable as even the best samples were not long enough to put it in the high priced class and would only be useful for the making of whisks and for the inside of brooms.

Teff.—Twenty samples of this annual grass were placed with men who were interested in giving it a trial. By seeding it shallow on well prepared land nearly every one had a good stand, and produced a crop of excellent quality from one to two feet high. In most cases some seed was ripened. If this grass were perennial instead of annual in habit its value would be unquestionable, but being an annual it probably is no better suited to our conditions than some of the finer millets. It produces, however, a hay much finer in quality than millet and apparently fully as palatable. Further trials may show that it has a place.

Crested Wheat Grass.—Twelve men planted trial lots of this hardy perennial grass. It has been doing well enough in Montana to warrant its being thoroughly tried out here where the conditions are similar. Seeded in the spring it got well established during the season and should produce a crop of hay or seed next year.

SHORT COURSES AND MEETINGS.

During the year a number of farmers' meetings were addressed on subjects of interest in the various districts. Four were held in the Brooks district in February; four near Morrin in March; eight in the Peace River country in March, and seven in June around Grassy Lake and Burdett. Two day short courses were held at Bindloss and Oyen in February. Four sessions were held at each place, and in spite of unfavorable weather there was an average attendance of 70 at the Bindloss meetings and 90 at Oyen.

I also judged at the Provincial Seed Fair at Calgary, the Seed Fair at Berwyn, the Corn Shows at Milk River and Lethbridge.

OTHER ACTIVITIES.

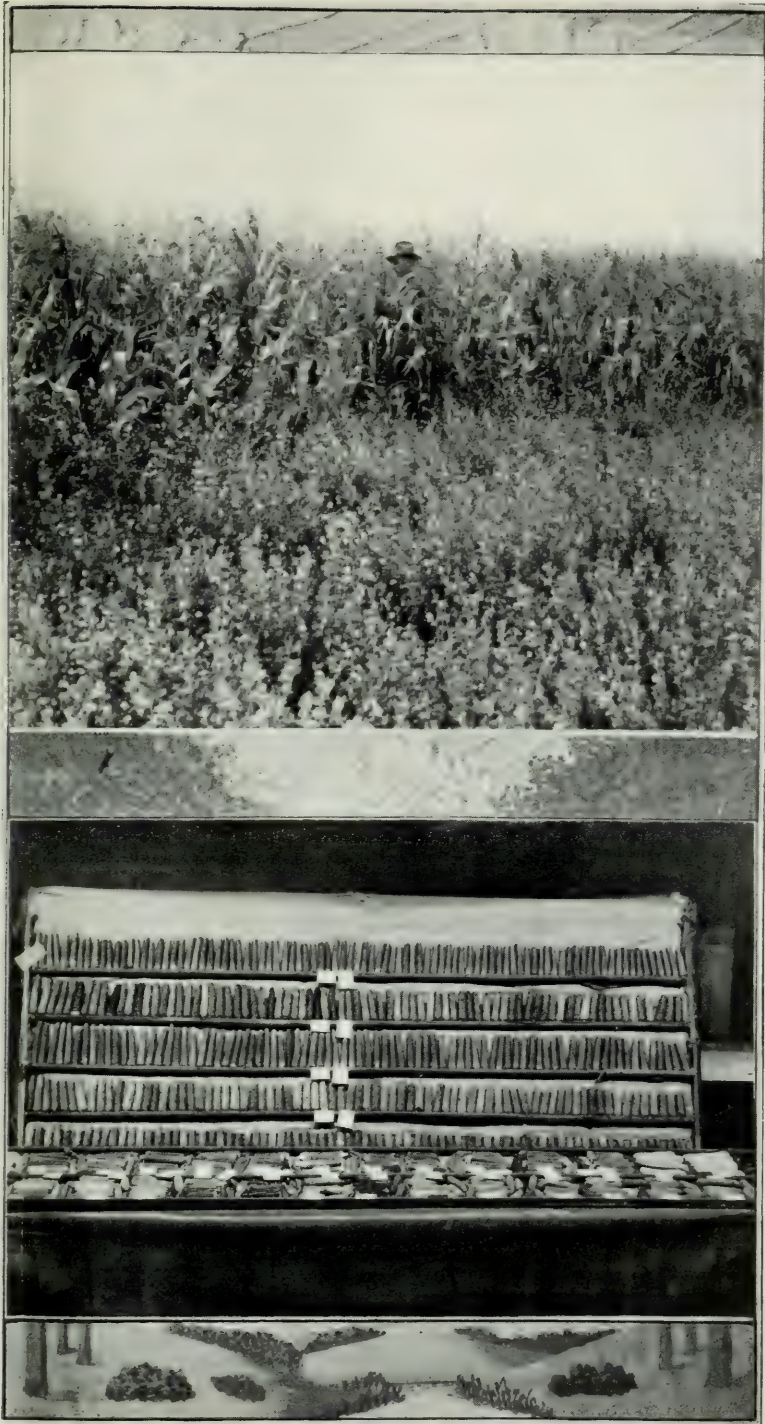
A 30-page circular on Feed Growing in South-Eastern Alberta was prepared and issued early in the year, and over five thousand copies were mailed from this office to farmers in the district.

In July an agricultural survey of the Holden Drainage District was made for the Drainage Council and a report prepared for their consideration.

Throughout the year there has been a fairly heavy correspondence from farmers on all phases of farming. While some inquiries can be answered by sending a bulletin or a circular, many others require individual attention by letter, and frequently a call later at the farm. Many farmers have been helped to get a supply of high class seed and others have been put in touch with sources of supply of breeding stock. Those having good seed or breeding stock to dispose of have been assisted in finding a market.

During the spring months a considerable number of farmers decided to move to other parts of the Province and their applications for transportation passed through this office. About a dozen others have moved since last September. While there is sure to be a number of others move their locations from time to time it would appear that most of those now living and farming in this part of the Province intend to remain here. Certain large districts where the growing of crops has been most precarious have been practically depopulated except for an occasional man who is working gradually into a farming-ranching proposition, running considerable stock, partly on his own land and partly on that owned by various parties, and growing feed with some grain for sale in favorable seasons. Many of these farmers are working into flocks of sheep as their capital permits; others have cattle or horses or all three classes of stock.

In other districts where climatic and soil conditions are more favorable more attention is paid to grain growing, but the great majority are keeping some cows and poultry and a few hogs. With the knowledge gained from experience more attention is being given to proper methods of soil cultivation, the growing of feed for stock and the husbanding of resources of both money and moisture from year to year, and the production of revenue from



CORN GROWING IN SOUTHERN ALBERTA--Acreage in fodder corn in Alberta has grown from less than 15,000 acres in 1922, to more than 70,000 acres in 1925. Top picture shows field of corn and alfalfa in Southern Alberta. Bottom picture shows exhibit of corn at Alberta Seed Fair.

the farm twelve months in the year. The main source of revenue is still quite properly, grain, but entire dependence upon it is now comparatively rare and is becoming more so from year to year.

While progress has been made in working out a system of farming better suited to the district than that practised for a number of years, there is still an unlimited field for advancement. As yet there is still a comparatively small percentage of farmers who work their land by the most approved methods, few who devote enough attention to growing good feed in quantity and few who have stock and poultry of the type to make the best use of it and sell for the highest price. The general average must be raised far beyond the present point before the country is able to show its real capabilities.

Many farmers are earnestly working toward a solution of their many problems and it is a pleasure to be able to render them some assistance.

Respectfully submitted,

JAMES MURRAY,

District Agriculturist.

REPORT OF M. L. FRENG, DISTRICT AGRICULTURIST,
LETHBRIDGE

S. G. CARLYLE, ESQ.,

Livestock Commissioner.

SIR,—

I have the honour to submit herewith my annual report as District Agriculturist for the Lethbridge district for the year 1925.

The agricultural conditions have greatly improved in the Lethbridge district the last two years, with the exception of some of the drier areas. The moisture conditions commencing the season of 1925 were only fair, but the precipitation for March, April and June was ideal. The weather was favorable and promoted a very rapid growth, but during the first two weeks of July the weather turned very dry with extremely hot winds. The heavy tender growth on the non-irrigated land shrivelled and reduced the wheat yield in many cases from 40 to 10 and 12 bushels of low grade wheat per acre. The crops northwest of Lethbridge were not affected to the same extent and some very good yields were harvested. The crops in the irrigated districts were excellent, due to the favorable spring conditions which enabled the farmers to irrigate their entire crop before the drought. The wet weather throughout September and October caused considerable damage which reduced the yield and grade. The first cut of alfalfa went into the stack in good condition, but the second cut was badly damaged.

We spent considerable time in connection with the growing of fodder crops suitable for the farmers on the non-irrigated land. Corn and sweet clover seem to be the most dependable and very satisfactory results have been obtained. A large quantity of sweet clover seed was sold by the Lethbridge dealers during the spring of 1925. Some farmers experienced difficulty in getting a catch. This will always be a drawback in the dry areas. However, methods of seeding will to a certain extent overcome this trouble. We find where sweet clover is seeded early on good summer-fallow and on a firm seed bed without a nurse-crop that there is usually enough moisture to ensure a good stand and to allow the plants to get well rooted and stand the drought later in the season. Generally speaking, throughout the dry areas the seeding of sweet clover or other varieties of grass with a grain crop has not proved satisfactory. Where a catch of clover is obtained it will produce more pasture or hay per acre than any other variety of grass so far introduced into the dry areas.

Good progress has been made in the growing of corn throughout the Lethbridge district. During the spring of 1925 we received a great many inquiries for seed corn, but there was very little home-grown seed obtainable so I discussed the matter with various interested organizations in Lethbridge and accordingly the board of trade and the exhibition board advanced \$200.00 and authorized me to purchase a quantity of suitable varieties of seed in northern Montana. I succeeded in getting a quantity of North Western Dent, Dakota White Flint, Gehu and Improved Minnesota No. 13. This seed was distributed in ten pound lots to about 200 farmers at cost. The idea was to enable as many farmers as possible to grow a seed plot of their own of a suitable strain so that they could select their own seed for the following year. A great many farmers have planted corn on land which would otherwise be summer-fallowed and have obtained very satisfactory results and this fall I have known of hogs being finished in the corn field without any additional grain. But in order to obtain the best results from our corn it will be necessary to pay more attention to the selection of acclimated seed and I am in hopes that in a few years all corn growers can be supplied with home-grown corn of acclimated varieties which will be a great improvement over the results accomplished in the past. A very successful corn show was held at Lethbridge in November. There were fine exhibits from all parts of Southern Alberta and the prizes were fairly well distributed. Approximately 2,500 ears of corn were on exhibit.

NEW IRRIGATED PROJECTS.

The settlers in the new irrigated projects, especially the Lethbridge Northern, have taken up a great deal of our time. Mr. Giffen has devoted nearly all of his time during the last two years to assisting farmers in that project, locating irrigation laterals and with general irrigation practices. But considering that there are about 105,000 acres in that project it was impossible for us to keep up with the requests that were coming in from that district.

A conference was held at Lethbridge in this connection and it was agreed that this was very important work and without assistance along these lines the farmers would not be able to irrigate their crops. It was decided that sufficient staff should be employed to survey and lay out all field laterals, say 75 to 150 ft. apart on 40 acres of each quarter. This was to demonstrate to each farmer the value of a proper system of field ditches for irrigation. It was considered that it would take twelve instrument men, each having a rodman, to accomplish this work in time for irrigation. Accordingly I was authorized to engage these men and supervise the work. We were fortunate in securing the services of six practical irrigators. The project was laid out in twelve districts and men put in each district to carry on this work. Mr. Tempest, of the Department of Interior, kindly consented to assist in the work and furnished six engineers who accordingly were placed in the other six districts on the project. This work, I may say, was carried on very smoothly and we had the best co-operation of everyone in the project. About 410 parcels were surveyed and all field laterals were staked out by these men. However, after these 40 acre tracts were completed these men carried on with the majority of farmers and surveyed additional land and in many cases all the land on some of the farms were staked out by these government men. They were also on hand to give assistance in connection with the building of the ditches and spreading the water which was very necessary owing to a great many farmers having no previous experience. There were approximately 45,000 acres irrigated on the project during the season and very satisfactory crops were obtained all over the project, while in some cases on dry land which was not irrigated the crop yields ran around eight bushels to the acre. The farmers, I think, appreciated these services and I personally believe that they are at last four years ahead with their irrigation methods and practices than if they had been left without this assistance. I am of the opinion that this work should be followed up one more season as there is going to be a great number of new settlers in the district who have not had any experience with irrigation.

In addition to the irrigation work we have encouraged development along the permanent lines in the way of getting some alfalfa seeded and some pasture; also gradually getting a start in some livestock. This in some cases will be slow, but we can see a gradual tendency toward a permanent type of farming in our irrigated districts.

The Lethbridge district Boys' and Girls' Calf Club had a very successful year. There were 35 members. Boys and girls from Taber, Chin, Coaldale, Hardieville, Lethbridge, Magrath, Raymond and Spring Coulee took part in the competition. The calves, of Hereford, Shorthorn and Angus breeding, were carefully selected and of uniform size and conformation. They were turned over to the members at \$20.00 each; average about 550 pounds. The feeding commenced December 1st and the calves were exhibited and auctioned off at the Lethbridge fair in August.

They brought a total of \$3,266.25, which was distributed amongst the members. The champion calf brought 30 cents per pound, and the balance also brought very substantial prices. The members worked faithfully throughout the feeding period and it was generally admitted that the calf club brought out the finest class of baby beef ever exhibited in Western Canada.

A very successful short course was held at the experimental station. We had a very good attendance and there was keen interest shown. Several expressed their appreciation and requested that this course be held annually.

I attended a series of farm meetings in the irrigation block at Brooks. Also various meetings throughout the year in the Lethbridge district.

We have distributed a great many trees to settlers and various varieties of seeds to farmers desiring to give them a trial.

We assisted in planning some home grounds and farm layouts. Also in locating breeding stock and disposing of same.

The office work is increasing each year. We have enjoyed the best co-operation from the various organizations in Lethbridge and district and I feel that in Southern Alberta, especially the Lethbridge district, agriculture is entering a period of sound optimism and there are signs of developing along permanent lines.

Respectfully submitted,

M. L. FRENG,

District Agriculturist.

REPORT OF F. H. NEWCOMBE, DISTRICT AGRICULTURIST, VEGREVILLE

S. G. CARLYLE,

Livestock Commissioner.

SIR,—

I have the honour to submit herewith my annual report as district agriculturist for the Vegreville district for the year 1925.

Generally speaking crop conditions were satisfactory throughout the season, especially in view of prospects which prevailed in the early spring. There was more water than usual and on many farms there remained considerable threshing to be done before seeding operations could begin. As a result of these delaying circumstances not so much wheat was sown as would have been the case otherwise, though it was generally estimated that the amount of new breaking seeded would about bring the wheat

acreage up to normal. Rather a larger percentage than usual was stubbled and disced in. Growth was very rapid during May, June, and July, and on the whole the season was much earlier than 1924.

Drouth affected the yield over a limited area, hail caused slight damage in some parts, and in a few places there was slight frost damage, but on the whole the yield was good and with prevailing prices this season was a successful one for the farmers in this district. Average yields are estimated as follows: Wheat 25 bushels per acre; oats, 40 bushels per acre; barley, 28 to 30 bushels per acre. Most of the wheat graded No. 2 and No. 3 Northern though a large percentage of the oats graded tough owing to wet weather in late threshing. Most of the harvest and threshing season was very favorable and there was little loss.

In a general way also fair success attended the efforts of this office during the past year. The farmers over a larger territory are making use of the services provided and a greater interest is being shown in the work as it progresses.

From the beginning of January to the middle of March the agriculturist spent four days each week at the Vermilion School of Agriculture giving live stock work to the English immigrant boys in attendance there. During eighty lecture periods horses, beef cattle, dairy cattle, sheep and swine were discussed from a practical standpoint. Breeds common to Alberta were taken up with a little on history, but more attention given to characteristics and their suitability for Alberta conditions. Most of the periods were of one and one-half hours' duration, the first half being used for lecture work and the second half given over to judging and demonstration. In the judging, stress was laid on market type and commercial suitability with enough breed type for identification. Practical methods of feeding and management of each class of stock was discussed. The general principles of breeding and feeding were the subjects of a few lectures. One period was spent on herd records and the Canadian National Live Stock Records.

The district agriculturist work at Vegreville was necessarily handicapped on account of the time spent at Vermilion. No attempt was made to carry on winter work, such as country meetings or short courses though assistance was given in this work at Manville. Successful summer work depends to some extent on thorough winter organization. This organization work was very much curtailed by the Vermilion activities and had its effect on the summer's results.

A study of conditions in this district seems to justify the conclusion that the most fruitful lines of activities are those undertaken among the girls and boys. Accordingly considerable of the time of the agriculturist has been devoted to this work.

DAIRY CALVES.

The dairy calf club was conducted along the same lines as last year. Eighteen calves of good type and quality were exhibited at the school fair. Nearly all of these were purchased for members and were secured at Edmonton or Vermilion at prices ranging from \$5.00 to \$25.00. Holstein blood predominated though there were a few of other breeding. Classes were provided at the school fair for yearling heifers which were exhibited at last year's fair.

BEEF CALVES.

Two beef calf clubs have been carried on during the past year, one at Vegreville and one at Ranfurly. The former had a membership of 23 and the latter of 14. The quality of the calves generally was good and the calves came out to the fair in good condition. The one weak feature of these clubs has been the small percentage of calves which were carried on to the spring show or any other definite culmination. Too often the club fair is the end of the project and the calf is turned out to rustle for a living, the boy thereby losing the valuable training to be secured by fitting the calf for final show and market. This is to be remedied in the season of 1926 when we hope to have a carload of calves to market at the Edmonton Spring Show. In 1925 Vegreville district calves won 5th, 10th, and 15th in the Boys' Feeding Competition.

Perhaps one of the reasons why boys in this district have not been enthusiastic about the Edmonton Calf Feeding Competition is because they consider it a professional proposition. Correctly or not they seem to think they must have one or more nurse cows and must have an advanced knowledge of feeding before they can hope to win there. Certainly boys and girls attending school can scarcely hope to give the care and attention necessary to win. If this competition were put on a really practical basis it would be much easier to get competitors.

SWINE CLUB.

Following the successes of 1924 there was considerable enthusiasm among members of the swine club for 1925. Thirty members were enrolled. The boars placed in the district in the fall of 1924 arrived rather late with the result that members' pigs were farrowed rather too late for club purposes. Accordingly quite a large number had to be purchased. Prices were somewhat higher though rather better quality hogs were secured. At the club fair held on September 11th, 29 pairs were exhibited which was a good percentage from 30 members.

In the carlot competition at marketing time the Vegreville carload stood in second place. In the single classes Vegreville hogs won 8th, 9th, 10th and 13th. The Vegreville team stood 8th in the Inter-Club Judging Competition and 1st in the Canadian National Railways Competition. They stood 2nd to Grande Prairie in the aggregate.



VEGREVILLE SWINE CLUB TEAM—Winners of C.N.R. Competition, Swine Club Show, 1925. Members of team: James Wyllie and Clifford Lynn. Coach: F. H. Newcombe.

The Vegreville team went to Toronto as guests of the Canadian National Railway, leaving home on November 13th and returning to Vegreville on November 25th. They were accompanied by the agriculturist and were given further training en route at Saskatoon, Winnipeg and Toronto. In the Dominion Competition, Vegreville stood 4th with eight teams competing. The competition was much keener than last year and the eastern teams showed greater training and proficiency in judging. They have a decided advantage in that good bacon hogs are much more widely distributed than in the west. It would seem that the team winning the provincial competition should have intensive training, possibly from members of the University staff, before leaving for the east. The demonstration given by the Alberta team was adjudged to be the best.

During the season sows of pure or good grade breeding were distributed throughout the district to swine club members and others. A total of 82 sows of good bacon type have been put out through the efforts of this office. One encouraging part about the work this year has been the demand from Ukrainian farmers for bacon type sows. Good breeding stock could be distributed in large numbers among these people if we had assistance.

Following up the work with swine, additional boars were placed in the district under the federal loaning policy. The total number of boars placed under this scheme in this district is now 19 and in addition this office may claim credit for five boars of good type which have been purchased by farmers in the district. Of the loaned boars 17 are Yorkshires and two are Tamworths. Two years ago scarcely a boar of bacon type could be found here. At that time the number of "select" hogs arriving in Edmonton from this district was practically nil; now buyers on the yards are remarking the appearance of six to twelve of these in a carload from here.

Perhaps one of the principal benefits accruing from this work is the evidence of better methods of feeding and management, hogs coming to market weight at an earlier age, larger litters and stronger pigs from the use of potassium iodide. This is particularly needed among the Ukrainian farmers north of the railway line. Three boars were placed among these people.

POULTRY.

In early spring 35 cockerels from Record of Performance breeding were brought in and distributed to members of the poultry club. These were mated with selected pullets from the eggs put out to the club in 1924. Five hundred baby chicks were secured and 1,200 eggs ordered from the R.O.P. Association of British Columbia. These were distributed on the same basis as the previous year, i.e. 40 eggs or 25 baby chicks to each member. Some took more than the minimum number. The eggs secured from the coast did not show a very good hatchability, but the chicks came through in good condition.



BOYS' AND GIRLS' CALF CLUB, LETTBRIDGE EXHIBITION

At the Spring Poultry Show held by the Exhibition Association the judge pronounced the school club poultry to be the best exhibit there. This club is doing a great deal to stimulate interest in better poultry on the farms and is demonstrating the difference in the laying capacity of hens, as well as teaching the young people proper methods of care, management and housing. Plans are under way for more comprehensive work for 1926.

Some flock culling has been done by the agriculturist when requested. No active part was taken in marketing this season.

GRAIN.

Most of the work with grain improvement has been in connection with the Boys' Grain Club. Under this policy each boy or girl takes one bushel of registered first generation Marquis wheat or Victory oats. Field crop competitions held in the summer stimulate the members to keep their plots in good condition. Arrangements are made for inspection by the Canadian Seed Growers' Association. Completing registration of this grain has been optional with the members and perhaps the weakness of the system has been that too few members have done it. The seed is usually retained at home. On 29 farms last season and on 40 farms this season registered grain of good quality has been introduced where probably it would not otherwise have been grown. In the aggregate the result after two years of operation is enough Marquis wheat eligible for registration to seed 3,500 acres in 1926. For the purposes of the competition members are required to use first generation seed each year.

HORSES.

Two stallion clubs were organized under the federal assistance policy. Considerable attention was given these by the agriculturist. meetings were called and mares listed and details attended to before the organization was completed and the books handed over to the secretaries.

The Percheron breeders secured the stallion Jules, owned by Dr. Head of Regina. He had been champion at eastern and western exhibitions and was a proven foal getter. He has since been purchased by a syndicate of farmers in this district and will probably be clubbed again next year.

The Clydesdale club signed the horse Bonnie Woodside, owned by Massie Bros. of Midnapore, Alberta. This stallion is sired by Bonnie Buchlyvie and is one of the best stock horses in the west, having been the sire of many good ones.

Both clubs had a membership of 40 with 100 mares listed, and both apparently have had good seasons. As a result of the interest aroused a Belgian stallion was purchased by a farmer in the district.

Attempts to organize swine clubs at other points along the line proved abortive. Lamont and Innisfree were prospects, but organization was not completed and another effort will be made at these places next spring.

Two alfalfa plots seeded in an experimental way in 1924 under my instruction came through the winter in good shape and made good growth throughout the summer. There was evidence of a heavy yield of seed but the fall weather was so cool that it did not set well and frost overtook it. From one year's results it would seem that this will not be an alfalfa seed producing centre.

A plowing match was held at suggestion for the first time in this district under the auspices of the Exhibition Association. It was quite successful though only 11 competitors took part. These were visited upon request and information given on setting plows and on the rules and customs of the match. Assistance was given to the management also.

Assistance was given to the field supervisor in weed work and six meetings were attended at which addresses were given on weed control.

Two days were devoted to inspection work at Daysland for the drainage council. I judged at two agricultural fairs.

In all I have attended and addressed 36 meetings at country points. Subjects chosen have covered a range of things of general interest to farmers with usually special reference to work among the young people. The country meetings provide an opportunity for getting acquainted with the people and open up new lines of activity.

No statistics can be given with reference to the information given out from the office, but it is sufficient to say that it has covered almost every phase of practical agriculture and the request for this is growing. It is almost reaching the point where it is difficult to get office work done on account of the farmers dropping in to discuss their problems.

Respectfully submitted,

F. H. NEWCOMBE,
District Agriculturist.

REPORT OF H. W. SCOTT, DISTRICT AGRICULTURIST,
SEDGEWICK

S. G. CARLYLE,

Livestock Commissioner.

SIR,—

I have the honour to submit herewith my annual report as district agriculturist for the Sedgewick district for the year 1925.

The year 1925 has on the whole been a fairly satisfactory one. Crops at threshing time yielded a little better than was expected, and a considerable quantity of back indebedness has been wiped out. The wheat pool shippers, getting three payments during the year, were able to carry on without depending so much on loans as under the old system, when one payment was made when the wheat was sold. The threshing season was unfavorable and a large portion of the wheat, oats and barley offered to the elevators is tested for moisture before being purchased and a considerable portion of it is being paid for on a tough or damp basis. This feature of the grain business is causing considerable dissatisfaction.

LIVESTOCK IN GENERAL.

Beef cattle prices were about one cent higher during the fall than a year ago, and with more feed available there are more cattle being fattened this year than last. Horses are bringing a little better price than a year ago, and while horse breeding was not entirely abandoned it was greatly curtailed for the past few years, but there is evidence of a renewed interest in horse raising in the districts most suitable for this branch of farming. Hogs are bringing a good return on the value of the grain given them, and there is about a 20% increase in the number of sows being bred this winter. Since the middle of the summer there is a noticeable change of opinion in favor of hog grading and the public have more confidence in the market for the bacon hog. This is evidenced in the strong demand, for the first time, for sows of bacon type. The demand along this line is greater than the supply. The supply of cream has fallen off somewhat this fall, due partly to unfavorable weather in October and November, and partly to the higher returns from the wheat acreage as compared with two years ago. The Sedgewick Co-operative Creamery was able to send out a bonus cheque of 2½ cents a pound butter fat to all its patrons, covering all the cream received during 1925.

The pasture and fodder problem is being solved now by a goodly number of the best farmers with sweet clover. This crop is gaining rapidly in favor and there is a noticeable increase in the acreage devoted to it. It is being used as pasture, silage, hay and as a crop to plow under to add humus to the soil when the vegetable matter is depleted and the soil is beginning to blow. Wheat returns on land into which sweet clover has been plowed the previous year have been 7-10 bushels higher than on bare summer-

fallow, and almost invariably the grade of the wheat has also been better. Sunflowers are still grown on farms where live stock is extensively depended upon, but there is a noticeable decrease in the extensive acreage grown some years ago. If farmers were assured that they could get northern grown seed, corn would be more generally grown, but up to the present the seed corn has not been such as to establish confidence. Around Camrose and the western portion of the district, alfalfa is gaining in favor when the Grimm and Variegated variety of northern grown seed is used, the soil well prepared and the seed inoculated.

A severe hail storm on August 3rd extending from Rosalind to Hardisty, a distance of about 50 miles long and 4 to 11 miles wide, through the finest crop area, did untold damage, battering everything, grain, fodder and gardens into the ground, and left many of those over which it passed short of feed, necessitating the sale of a goodly portion of their live stock.

FARM LABOR.

The securing and distribution of extra farm help has become a general work of this office throughout the year. Homes were secured for a number of the British boys who attended the School of Agriculture at Vermilion in the winter of 1924-25. Most of these boys proved satisfactory and secured good training on the farms selected for them. Generally, the farm labor this year was more satisfactory than for some years past. Somewhat over 250 farm hands were placed during the year. A number of new settlers located in the district and it has been my privilege to assist quite a few of them in various ways to get established.

FAIRS, SHORT COURSES AND MEETINGS.

During the summer I attended the following agricultural fairs and acted as judge at most of them: Chauvin, Viking, Provost, Goose Creek, Sedgewick, Killam, Camrose, and the Camrose horticultural show. Two-day poultry courses were held at Camrose, Killam and Hardisty and a bacon hog course at Camrose. A Dominion government Loan Bull Association was formed with three societies east of Alliance. Some time was devoted to organization in each of the towns so that the farmers' eggs might be collected by one person, shipped to a qualified grading station from which the farmer might expect to get a proper grading and proper return for the quality of eggs produced for market. An effort was almost made to arrange that proper railway transportation would be provided for those eggs to Edmonton, and that a better system of collecting live poultry in carload lots be arranged in the district, but evidently the marketing agencies are not prepared to co-operate with each other or with the producers, so this matter will have to stand over for some time yet. A considerable number of meetings, were held, mostly during the winter months where a variety of farm topics were discussed. All possible assistance was given to Mr. W. J. Elliott in his effort to get in touch with prospective students for the School of Agriculture at Vermilion.

SCHOOL FAIRS AND CLUBS.

Eleven school fairs were held at which there were 10,401 exhibits, which included 101 schools with a total enrolment of 2,383 pupils taking part in this work. The following is a summary report of each fair showing the number of exhibits in each section and the average number of exhibits per pupil covering the total enrollment:

School Fair	Number of Exhibits in Various Sections						Exhibits per pupil on roll
	Vegetables and Flowers	Grain	Live Stock.	Cooking.	Sewing.	School Work.	
Provost	464	75	32	101	101	406	3.44
Czar	399	105	52	118	91	347	3.90
Amisk	374	50	27	88	86	321	7.00
Hardisty	423	70	57	114	99	373	3.63
Sedgewick.....	318	43	83	105	81	298	4.51
Killam.....	358	31	48	70	70	190	3.12
Strome	282	71	43	65	44	202	7.44
Camrose.....	797	80	75	188	90	364	3.38
Alliance.....	322	63	57	81	31	157	4.78
Treaty Hill ...	367	72	55	96	72	268	11.72
Battle Bend...	151	25	30	41	41	103	6.61
	4,255	685	559	1,067	806	3,029	

The boys and girls standing highest in their respective school fairs in 1924 attended the Scholarship Course at the School of Agriculture at Olds in July, 1925, and I was privileged to go along with these 22 pupils and to assist in the program for the week. This Scholarship Course is a real treat to those who earn it and is certainly appreciated by them and their parents, it stimulates interest in the fair and makes for keen competition between the aggressive pupils.

The class for beef calves at the school fairs has brought out many of the creditable exhibits for the girls' and boys' baby beef class at the Calgary and Edmonton Spring Shows. At the school fair the exhibitor having a suitable calf is encouraged to prepare it for the spring shows, and if he is not in a position to do so some one is always on the look out for this class of calf and it is easily sold. This district sent in all 18 out of the 62 entries to the 1925 spring show in Edmonton and were successful in capturing 9 out of the first 21 placings, winning 2nd, 9th, 10th, 11th, 12th, 14th, 17th, 20th, and 21st. The calf which stood second weighed 960 pounds and sold for 65 cents per pound, bringing \$624.00. This together with the prize money brought a tidy sum to the feeder. All the calves sold well, one bringing 9 cents, three brought 10 cents, and the balance ranging from 11½ to 14½ cents per pound. The success of the young people at these shows has given encouragement to quite a few of the adults who are now regular exhibitors in the open classes for beef, sheep and swine.

The girls' and boys' swine clubs of which I have six, are doing steady constructive work year after year. A few good sows are

brought into the district each year, but it is largely through the sires that the improvement in type is being made. Through the Dominion government sire-loan policy we have been able to get some of the best sires in Canada into the district. In the fall of this year we had in all 20 of these boars spread fairly uniformly over an area of 70 by 30 miles. These boars are used not only by the club members but by others as well, and in a number of districts only club boars are found. This is bringing about a much more uniform lot of market hogs with greater length, quality and smoothness.

At the swine club show held in Edmonton in November each of the six clubs was represented by four of its members, who took part in the judging competition, demonstration, and exhibited pigs singly and in pairs. In all eleven clubs took part in these events. In the judging competition they were placed as follows: Sturgeon, Grande Prairie, Sedgewick, Red Deer, Olds, Alliance, Czar, Vegreville, Hardisty, Battle Bend, and Killam. In the demonstration they were placed, Grande Prairie, Sedgewick, Vegreville, Red Deer, Sturgeon, Alliance, and Hardisty. The pairs of pigs exhibited by the respective demonstration teams stood: 1st, Grande Prairie; 2nd, Sedgewick and Vegreville (tie); 3rd, Red Deer; 4th, Czar; 5th, Hardisty; 6th, Alliance and Sturgeon (tie); 7th, Olds. In the class for single pigs the members of my clubs captured 3rd, 5th, 6th, 7th, and eleven other places in the thirty-five placings made of about 90 hogs exhibited.

Judging classes were held for each of the clubs and some assistance given with the demonstration, but with all the other duties and calls on my time these teams do not get sufficient coaching for the provincial competitions and if this work is to be strongly featured then it will be necessary to drop some of the other work or else to get some assistance.

GIRLS' AND BOYS' COMPETITION AT THE DAIRY COMPETITION

The Alberta Dairymen's Association, at its annual convention in 1925, at Calgary, arranged for a number of events for the girls and boys of the Province which appeared to stimulate interest in this industry among the young people and older ones as well. The Herd Book Record work brought out to those keeping them that there is a big difference in the productive ability of the herd not only in milk, but butter fat as well. The judging competition led to careful study of type, and the demonstration forced a very close study into type and feeding methods. This first year the time was short for preparation and there were not as many entries as will likely appear if this work is continued. Children from this district were able to capture three of the five prizes offered for Herd Book Records, and both teams coached here made a creditable showing in the judging and demonstration, and on their return from the convention presented their demonstration to a number of gatherings and helped to create a little more interest in better feeding methods.

Respectfully submitted,

H. W. SCOTT,

District Agriculturist.

REPORT OF A. R. JUDSON, DISTRICT AGRICULTURIST,
GRANDE PRAIRIE

S. G. CARLYLE,

Live Stock Commissioner.

SIR,—

I have the honour to submit herewith my report as district agriculturist for the year 1925.

SEASON.

With more than a normal rainfall during the fall months of 1924 winter set in with more moisture stored in the soil than had been the case for several years. The snowfall during the ensuing winter was very heavy. No chinooks arrived; the spring was rather late and the snow water found its way into the soil without a serious run-off.

This moisure was the deciding factor in giving the Peace River country a higher yield in 1925 than in the previous year. The 1925 rainfall was even lighter than that of 1924, being only nine inches. As was the case in 1924, August was the month of heaviest rainfall, whereas all records covering a period of years show July to be the heaviest month. The month of August was well along before the total precipitation dating from the first day of April reached four inches.

As indicated, lack of moisture was the limiting factor in crop yields. The heaviest crops were harvested north of the Peace River. That of the Spirit River district was a little ligher with the Grande Prairie district suffering to a greater degree. The average wheat yield would be in the neighborhood of 16 bushels. The oat crop was light. Sufficient good seed oats are not to be had and it is expected that some districts will ship in some feed oats. Plenty of oats, however, can be supplied by the Fahler and High Prairie districts where heavy crops were harvested.

The early fall was very unfavorable for harvesting and threshing operations. Later in the season drier weather prevailed, allowing the grain to dry out and resulting in a much better sample, on the average, than had been thought possible. Continued good weather allowed fall work to proceed. While one could hope for more good summer-fallow there is satisfaction in the fact that more acres are ready for crop than at the close of any previous season.

The fall and early winter months saw the amount of moisture stored augmented considerably. Winter set in with almost no frost in the ground. The snowfall, September to December inclusive, totals over 65 inches, being, by a margin of more than 10 inches, the heaviest recorded at Beaver Lodge where the available figures cover a period of ten years.

GRASSHOPPER CONTROL.

The dry spring was very favorable to grasshopper development, and, as was anticipated, another campaign was necessary. As in the previous year, upon the district agriculturist fell the responsibility of directing the work. J. Bonner gave some assistance, for a short time, at Berwyn.

The four stations in operation during the season of 1924 in the Grande Prairie district, were reopened during the latter part of May. The Halcourt station was moved to a point nearer Beaver Lodge where it was more satisfactory to the people of that district. When this was done arrangements were made for a distributing centre at Rio Grande, the bait being hauled from the Beaver Lodge station. Such an arrangement was more economical than the opening of another mixing station which would otherwise have been necessary. These four stations delivered over 245,000 pounds of bait. As most of this bait was mixed with less water, in order to prevent loss in hauling, the above figures are about 20% lower than the amount of bait they actually represent. The mixing station operated by Bear Lake Municipality turned out nearly fifty tons of bait.

Heavy losses were prevented by timely poisoning but a much greater saving could have been made by the use of considerably more poison bait. The grass remained greener than the previous season and while it was green the grasshoppers remained there in great numbers. As long as they did so it was difficult to arouse the public to the necessity of poisoning when actual crop damage was not being done. The grass dried out about the time the grasshoppers were ready to fly when they moved into the grain fields in some districts in swarms.

The M.D. of Spirit River operated a mixing station at Spirit River throughout the season. They realized the necessity for action and placed a man in the field to see that those requiring poison used it. For the first time the grasshoppers were well distributed over their district.

The area north of the Peace experienced its heaviest year in grasshopper control work. The two municipalities there were operating mixing stations the previous year and were ready for action early in the season. The Vanrena district and the greater part of the Waterhole district would have experienced almost a complete crop failure had not Fairview Municipality taken early action. Two carlots of bran were put through one mixing station and one through the other.

The M. D. of Peace River operated a station at Berwyn and did good work. This station supplied the Last Lake district with bait obviating the necessity for opening a mixing station at that point.

The mixing station operated at Peace River in 1924 was reopened to serve the local improvement areas in that neighborhood. Satisfactory assistance was given at that point.

During the month of June some sections of the Peace River Block in British Columbia were suffering from grasshoppers and an appeal was made to this office to secure them some relief. A report led to supplying them with materials and assisting them in initiating a campaign. Some sections of that district suffered considerable loss while the Fort St. John district was practically eaten out.

Considerable control work, in all probability, will be necessary next year. The area north of the Peace, with the exception of Fort Vermilion, has probably had its peak year. The latter point will likely require attention as some damage was experienced this year. Spirit River does not appear to have had its biggest year yet. There should be less grasshoppers in the greater portion of the Grande Prairie district next season.

WIREWORMS AND CUTWORMS.

Considerable damage was done throughout the district by wireworms and cutworms, but largely by wireworms. The loss has been heavier than any previous year. The wireworms were more prevalent on old land, summerfallow being the worst.

SWINE CLUBS.

Owing to the pressure of grasshopper work only the one Girls' and Boys' swine club, covering the same territory as last year and comprising 31 members was conducted. Thirty of these members brought their pigs to the swine club fair at Grande Prairie which was held the day previous to shipping to the inter-club competitions at Edmonton. This carlot stood first at Edmonton and graded 85% select bacon. In the single classes pigs belonging to the members of the team present stood 2nd, 4th, and 21st.

The team representing the club won the provincial championship, the Canadian Pacific Railway Competition and second in the Dominion Government Judging Competition. In the last named competition one member of the team tied for high boy and received the gold medal. As winners of the Canadian Pacific Railway Competition the team was taken to the Toronto Royal as guests of the railway company. They hold the company's trophy for the year and retain the silver medals.

The successful operation of the club is doing its bit toward the betterment of hog production in the district, as well as stimulating an interest in the work of the club. Grande Prairie, Beaver Lodge and Clairmont banqueted the team on their return from Toronto. Wherever the demonstration was put on keen interest was shown. Farmers in the district are getting more selects and as a direct result there is a growing feeling that after all it may be worth while to endeavor to produce the bacon hog. The club has assisted them in realizing that there is some truth in it.



GRANDE PRAIRIE TEAM—Winners of Carlot Competition and C.P.R. Competition, Swine Club Show, 1925. Members: Oscar Gudlaugson and Vern Johnson. Coach: A. R. Judson.

STALLION CLUBS.

Two stallion clubs were organized, one at Berwyn and the other at Wembley. Both secured Clydesdale horses from a local breeder, W. G. McFarlane of Sexsmith. The Berwyn club secured the imported horse Barrington. Barrington has been Junior Champion at Aberdeen and first and reserve at both Toronto and

During the month of June some sections of the Peace River Block in British Columbia were suffering from grasshoppers and an appeal was made to this office to secure them some relief. A report led to supplying them with materials and assisting them in initiating a campaign. Some sections of that district suffered considerable loss while the Fort St. John district was practically eaten out.

Considerable control work, in all probability, will be necessary next year. The area north of the Peace, with the exception of Fort Vermilion, has probably had its peak year. The latter point will likely require attention as some damage was experienced this year. Spirit River does not appear to have had its biggest year yet. There should be less grasshoppers in the greater portion of the Grande Prairie district next season.

WIREWORMS AND CUTWORMS.

Considerable damage was done throughout the district by wireworms and cutworms, but largely by wireworms. The loss has been heavier than any previous year. The wireworms were more prevalent on old land, summerfallow being the worst.

SWINE CLUBS.

Owing to the pressure of grasshopper work only the one Girls' and Boys' swine club, covering the same territory as last year and comprising 34 members was conducted. Thirty of these members brought their pigs to the swine club fair at Grande Prairie which was held the day previous to shipping to the inter-club competitions at Edmonton. This carlot stood first at Edmonton and graded 85% select bacon. In the single classes pigs belonging to the members of the team present stood 2nd, 4th, and 21st.

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Guelph. One of his get, Vactor Barrington, Canadian bred champion and winner of the Watson Shield at Edmonton in 1921, was hired by the Wembley club.

Some preliminary work was done on a Belgian club at Donnelly, but this club did not materialize.

AYRSHIRE CENTRE.

In addition to the organization of the stallion clubs outlined above, considerable work has been done securing suitable bulls and boars for the district. Some have been purchased by private individuals while in other cases the Dominion live stock branch loan policy has been freely used.

Two livestock centres have been formed at Valhalla and six Ayrshire bulls are to be supplied by the live stock branch early in 1926. The main income in that district is from cream. The co-operative creamery at that point while not experiencing quite as big a year was only 10,000 pounds under its previous record of 171,000 pounds. They paid over \$40,000 for cream. Is it merely a coincidence that only two seizures have been made on farmers in that district during the past five years?

CO-OPERATIVE COMMUNITY TURKEY KILLS.

With the co-operation of the Dominion poultry representative and the egg and poultry marketing service, co-operative community turkey kills were put on at seven points in the district. Approximately 5,500 turkeys were killed averaging over 10.5 pounds per bird. Shipments were made from Wembley and Sexsmith totalling over 57,000 pounds net.

The educational value of the kills has been worth while. Previous to the kills few people knew how to properly kill their birds or put them up as the market required them. It also provided an opportunity for many to see better birds than their own, stimulating a desire to do better another season.

From a marketing viewpoint the effort proved a decided success. First of all there was not only a better price paid locally than ever before, but the produce was handled in a much better manner and there was keen competition for it. Besides bringing about this improved market for every producer, whether he patronized the kills or not, it placed over \$2,700.00 more in the pockets of those who did than would have found its way there had they taken advantage of the local market stimulated as it was by the organization of the co-operative shipments. The co-operative shipment netted the farmers, for No. 1 birds over 12 lbs., 30c; 10-12 lbs., 28c; 8-10 lbs., 26c; 6-8 lbs., 23c; No. 2 over 10 lbs., 25c; under 10 lbs., 23c. No culls were shipped. Dressed poultry shipments have yielded the farmers of the Grande Prairie district a return of approximately \$40,000.

Through arrangements made with Mr. Cormie ten pure bred Mammoth Bronze turkeys and six Barred Rock cockerels were on display at the various kills. These were all sold and orders taken for many more.

SHORT COURSES AND MEETINGS.

During the second week in March a three-day short course was put on at Wembley, with a two-day course at Valhalla and single meetings at Buffalo Lakes, Lake Saskatoon, Beaver Lodge, Flying Shot and Kleskun Hill. There was a fairly good attendance the first two days at Wembley, at Valhalla both days and a good turnout at the Beaver Lodge and Buffalo Lakes meetings. Largely on account of bad roads and unfavorable weather the others were not good, two failed to materialize.

The short course at Berwyn the following week, with the exception of one day, was not much of a success, due largely to roads and weather. The single meetings through the district were poorly attended as well.

In addition to the above about thirty meetings were held during the year in connection with horse clubs, bull and swine associations, turkey marketing, weeds, grasshoppers, etc.

OTHER ACTIVITIES.

The field supervisor, Mr. Wesley Smith, carried on his work from this office. He was good enough to judge the standing grain competitions put on by the Lake Saskatoon Agricultural Society. Mr. John Norquay, cattle promoter in charge of the Edmonton office of the Dominion live stock branch, was in the district at the time and consented to judge the good farms competition which he did very satisfactorily.

During the year the writer judged the Lake Saskatoon Seed Fair and the summer fair held at Rolla, B.C.

At the close of the year, though crops were light on the average, it may be said with confidence that there is a decided improvement over the whole north country. In sections where crops have been good there is a wonderful improvement and at all points there is a financial betterment. The greatest and most apparent change, however, is in the morale of the people. In securing a more optimistic vision and a more settled feeling an advance worth while has been made. During the past year more people have come in than have gone out. The corner has been turned.

Respectfully submitted,

A. R. JUDSON,

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Respectfully submitted,

A. R. JUDSON,

District Agriculturist.

Report of the Brand Recorder

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit the following report on the work of this branch of your department, for the year 1925.

During the year 585 horse and 905 cattle brands were recorded to their respective owners, while 155 transfers and 3 changes were registered. Certified extracts of brands numbered 20, searches 10, and strays 5,517, making a total of 7,195 transactions.

Compared with the year 1924, these transactions show a decrease of 152 horse brands, 140 cattle brands and 110 transfers, with an increase of 2 changes. Certified extracts show an increase of 17, while searches and strays an increase of 1,701 transactions.

The following table shows the different transactions which have taken place since separate records for the provinces have been kept:

Year.	Horse.	Cattle.	Trans.	Changes.	Extracts, Searches, and Strays.
1906.....	1,361	1,894	384	38	73
1907.....	1,030	1,230	430	28	73
1908.....	1,103	1,225	421	29	292
1909.....	1,308	1,326	430	33	783
1910.....	1,891	1,672	534	34	1,218
1911.....	1,538	1,280	362	32	1,408
1912.....	1,545	1,542	374	16	1,655
1913.....	1,471	2,059	419	11	1,795
1914.....	1,964	2,629	395	18	1,932
1915.....	1,350	1,899	743	27	1,372
1916.....	1,503	2,833	463	28	801
1917.....	1,839	3,370	551	33	673
1918.....	2,161	3,455	617	40	985
1919.....	2,079	3,165	572	46	2,125
1920.....	1,363	2,133	514	30	1,944
1921.....	896	1,304	308	22	2,401
1922.....	708	1,092	225	23	2,548
1923.....	633	806	221	3	4,035
1924.....	737	1,045	265	5	3,826
1925.....	585	905	155	3	5,547
Aver. 17 yrs. . .	1,592	2,168	491	29	2,087

The number of applications for renewal of brands received during the year is 3,924, being a decrease of 1,954 transactions.

It has been brought to our attention by Mr. Wilson, agricultural products representative for Canada, in the Old Country, that the large brands on our export cattle are seriously objected to by dealers in the Old Country, and because of these brands the price of our hides are depreciated in value as much as \$10.00 each.

The manufacture of automobiles has made wonderful development the past few years, and an enormous amount of leather is required for this trade. Split leather is used and some of these hides are split into six different sheets. It can be readily seen that a brand will spoil at least two of these, and Mr. Wilson strongly recommends if it is at all possible, to have the branding done on the neck or the lower flank of the animal. Two character brands are also recommended in place of three character brands if done on the body of the animal, but even this would deteriorate the hide to a marked degree. It is claimed by the stock inspectors that during the winter months especially it is much harder to read brands if placed on these parts, and it is much easier to read them on the ribs or hip. Brands placed on the neck or lower thigh might sometimes escape them, but when there is a loss from \$5.00 to \$10.00 per head on each one of our export animals, due to body brands, it is worthy of the consideration of the stockmen to discuss this question and decide if some plan could not be adopted to minimize this loss.

Yours very truly,

S. G. CARLYLE,

Recorder of Brands.

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Report of the Dairy Commissioner

H. A. CRAIG, ESQ.,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit herewith the report of the dairy commissioner's branch for the year 1925.

I.—GENERAL.

In reviewing briefly the dairy business of the Province from year to year, we note certain outstanding points of interest that call for special mention. For the year 1925 the milk production was approximately five per cent. less than that of the previous year. As a consequence of this reduction we note a diminished output of creamery butter and factory cheese—13% in the former, and 20% in the latter case. On the other hand, the total estimated value of the dairy products for the year was close to that of 1924, owing to the higher prices that were ruling for practically all dairy products. The statistical tables which follow show that the price of creamery butter in 1925 was 11% higher than for the preceding year, and the increased selling price of factory cheese was even greater, amounting to nearly 25%.

The falling off in the year's milk production is generally understood to have been due to a combination of causes, such as severe weather conditions during the winter of 1924-25 and relatively low prices for butterfat in cream as compared with the market price of grain. It is expected, however, that this slight falling off in production will prove to be merely temporary, and that the added interest which the organization of the dairy producers of the Province will bring to bear upon production and marketing problems will result in giving a more stable basis to the industry.

DAIRY STATISTICS, ALBERTA.

(1) *Milch Cows:*

Year.	Cows.
1901.....	46,101
1906.....	101,245
1911.....	147,649
1912.....	157,922
1913.....	168,376
1914.....	179,068
1915.....	183,974
1916.....	284,895
1917.....	325,861
1918.....	328,702
1919.....	336,596
1920.....	305,607
1921.....	391,190
1922.....	392,037
1923.....	411,446
1924.....	434,237
1925.....	460,722

(2) *Total Annual Value of Dairy Products:*

1900.....	\$ 546,476
1910.....	7,855,761
1915.....	15,895,586
1916.....	18,466,311
1917.....	24,794,597
1918.....	27,500,000
1919.....	31,625,000
1920.....	34,000,000
1921.....	25,500,000
1922.....	22,950,000
1923.....	22,975,000
1924.....	23,208,562
1925.....	23,002,000

(3) *Creamery Butter Productions:*

Year.	Creameries.	Lbs. of Butter.	Selling Value.	
			\$	c. per lb.
1912.....	53	3,010,755	823,500	(27.352)
1913.....	49	4,115,537	1,090,475	(26.496)
1914.....	46	5,444,806	1,417,000	(26.025)
1915.....	57	7,544,148	2,021,448	(26.795)
1916.....	57	8,521,784	2,619,248	(30.736)
1917.....	66	8,944,171	3,414,541	(38.176)
1918.....	56	9,053,237	4,025,851	(44.469)
1919.....	53	11,822,890	6,132,739	(51.87)
1920.....	53	11,821,291	6,555,509	(55.45)
1921.....	44	13,048,493	4,543,007	(34.82)
1922.....	54	15,417,070	5,126,843	(33.25)
1923.....	75	17,868,853	5,891,186	(32.97)
1924.....	89	22,339,857	7,059,630	(31.6)
1925.....	99 (Est.)	19,500,000	6,873,600	(35.25)

(4) *Factory Cheese Productions:*

Year.	Factories.	Lbs. of Cheese.	Selling Value.	
			\$	c. per lb.
1912.....	6	40,000	5,600	(14.00)
1913.....	7	70,716	5,900	(14.00)
1914.....	5	70,581	10,590	(15.00)
1915.....	13	381,832	68,441	(17.93)
1916.....	15	745,122	154,453	(20.73)
1917.....	20	1,274,905	280,185	(21.97)
1918.....	11	552,834	130,911	(23.68)
1919.....	10	520,530	145,161	(27.9)
1920.....	7	398,750	110,355	(27.7)
1921.....	10	930,660	200,478	(21.54)
1922.....	14	931,992	183,860	(19.73)
1923.....	13	1,865,608	368,771	(19.77)
1924.....	12	1,714,790	278,478	(16.24)
1925.....	14 (Est.)	1,375,000	278,400	(20.25)

CREAMERIES AND CHEESE FACTORIES.

There was a further increase in the number of creameries operated during the past year; the total being 99 as against 89 for 1924. New creameries were put into operation at Nanton and Acme, by P. Burns & Co., Ltd.; at Carstairs and Okotoks, by the Central Creameries, Ltd.; the Scona Creamery Company established new plants at Edmonton (South) and at Wetaskiwin; the Farmers' Dairy Company, at Edmonton; the Crystal Dairy, Ltd., at Macleod; the Mutual Creamery Company, at Wetaskiwin; the

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1916.....	15	745,122	154,453	(20.73)
1917.....	20	1,274,905	280,185	(21.97)
1918.....	11	552,834	130,911	(23.68)
1919.....	10	520,530	145,161	(27.9)
1920.....	7	398,750	110,355	(27.7)
1921.....	10	930,660	200,478	(21.54)
1922.....	14	931,992	183,860	(19.73)
1923.....	13	1,865,608	368,771	(19.77)
1924.....	12	1,714,790	278,478	(16.24)
1925.....	14 (Est.)	1,375,000	278,400	(20.25)

CREAMERIES AND CHEESE FACTORIES.

There was a further increase in the number of creameries operated during the past year; the total being 99 as against 89 for 1924. New creameries were put into operation at Nanton and Acme, by P. Burns & Co., Ltd.; at Carstairs and Okotoks, by the Central Creameries, Ltd.; the Scona Creamery Company established new plants at Edmonton (South) and at Wetaskiwin; the Farmers' Dairy Company, at Edmonton; the Crystal Dairy, Ltd., at Macleod; the Mutual Creamery Company, at Wetaskiwin; the

Castor Creamery Co., Ltd., at Castor; the Chipman Creamery Co., Ltd., at Chipman; the High River Creamery, at High River; and a combined butter and cheese factory at Calmer, by Messrs. Carr and Cameron. The cheese factory at Ledue was fitted for the manufacture of both butter and cheese.

The creamery plants that had formerly been in operation at Duchess, Hoadley, Mayton and Edmonton (E.C.D.) did not re-open.

Cheese factories were operated at fourteen different points in the Province, as against twelve in 1924. Plants were started at Buford and New Sarepta, while the one at Rossington did not re-open. The creamery at Millet was operated as a combined cheese and butter factory during the year.

DAIRY LEGISLATION.

The Dairyman's Act, being Chapter 162 of the Revised Statutes of Alberta, 1922, was amended by the 1925 session of the Legislature, as to section 38 by adding as subsections (2), (3), (4), (5) and (6), the following:

"(2) The Minister may appoint and define the duties of provincial dairy produce graders, testers and weighers.

"(3) Every such grader, tester or weigher shall have the right when directed by the dairy commissioner to enter into any creamery, cheese factory or dairy and there continue for such time as they may be directed for the purposes of grading, testing or weighing dairy produce in accordance with the regulations from time to time made by the Minister.

"(4) The Minister may assess every owner of any such creamery, cheese factory or dairy with a reasonable proportion of the total cost of the services of such graders, testers and weighers, and shall at his uncontrolled discretion fix and determine the said proportion, the times when the same is payable and the method in which it is to be paid.

"(5) All such assessments shall be a debt due from the respective owners to the Crown and when received by the Minister shall be deposited to the credit of the Provincial Treasurer in a chartered bank to defray the expenses of the services as above outlined.

"(6) 'Dairy' in this section shall mean any place to which is brought the milk or cream from the herds of five or more persons for the purpose of being manufactured into ice cream or for re-sale, and 'dairy produce' shall mean butter, cheese, milk and cream."

Under subsections (2) and (4) of Section 38 as amended, the Minister issued the following regulations, dated May 28th, 1925:

DUTIES OF GRADERS, ETC.

It shall be the duty of a provincial grader, tester and weigher, while stationed at a creamery, cheese factory or dairy:

(1) To grade and classify the milk or cream as received from patrons, according to the standards defined by regulations under the Act; to see that the grade and classification be, in each case, accurately entered upon the dairy record made as specified in Section 13 of the regulations made under the Act, and to sign each such record. The grade and classification so determined and recorded shall be the official grade and classification, and the basis upon which final settlement shall be made for the milk or cream received as aforesaid.

(2) To weigh and to make Babcock and other tests of such lots of milk or cream as the dairy commissioner may from time to time direct.

(3) To obtain from the operator, manager, or other person in charge, a clear and legible carbon copy of the completed dairy record, and to summarize and promptly forward the same to the dairy commissioner with such other records and particulars as he may require.

(4) To be responsible for any equipment and supplies that may be furnished him from time to time by the dairy commissioner.

(5) To offer his services to assist generally, during business hours, in such other work as may be reasonably assigned to him by the person in charge, when he is not occupied in the performance of his primary duties as herein set out.

CREAM GRADING SERVICE CHARGE.

(1) For the purpose of the general service charge provided for in Subsection (4) of Section 38 of the Act, and effective as from the 4th day of May, 1925, the preliminary assessment shall be based upon the following schedule, showing in Column I, the estimated quantity of butterfat contained in the cream graded by a provincial grader at any creamery during the year, and in Column 2, the rate in cents per 100 pounds of such butterfat.

Column I.	Column II.
Up to 225,000 pounds	80 cents
225,000—275,000 pounds	70 cents
275,000—325,000 pounds	60 cents
325,000—375,000 pounds	50 cents
375,000—425,000 pounds	45 cents
425,000—475,000 pounds	40 cents
475,000—575,000 pounds	35 cents
575,000 and over	30 cents

(2) The said assessment shall be made once each month, when the dairy commissioner shall forward by mail, to the operator of the creamery, an account of charges payable within fifteen days of its date. If, in any case, payment of such account be not received, a sight draft shall be made for the amount with exchange.

(3) A final adjustment shall be made with each such creamery after the end of the year, when the total cost of the services shall have been ascertained.

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MOULD AND YEAST ANALYSIS OF CREAMERY BUTTER.

This subject was given considerable attention at the provincial dairy convention, held at Calgary, in February, 1925. Dr. E. G. Hood, chief of the division of dairy research in the Department of Agriculture, Ottawa, gave an able presentation of the results of some work which had been carried on during the previous year. He showed that a high mould and yeast count in butter impaired its commercial value especially for export, and further proved that it was quite practicable to keep the moulds and yeasts in butter at a comparatively low point by closely guarding against the re-contamination of the pasteurized cream during the manufacturing process. An interesting and spirited discussion followed Dr. Hood's paper, and the convention passed a resolution commending the research work that had been so well begun by the Dominion Department of Agriculture, and expressed the desire that it be continued and extended as rapidly as possible to the many other problems that confront the dairy industry.

In view of the great interest shown in this matter and the annually increasing production of creamery butter in Alberta, the Minister gave his approval to have the work of the provincial butter grading service supplemented by the appointment of a bacteriologist who would make periodical mould and yeast analyses of butter, submitted by the creameries of the Province for grading, and also make occasional bacteriological surveys at creameries in order to locate the principal sources of high mould and yeast counts in butters. Mr. Paul L. Schwartz was appointed to carry on this new work, and the faculty of medicine of the University of Alberta very generously placed a well equipped laboratory at our disposal for this purpose. The analytical work was started early in June and at the close of the year Mr. Schwartz reported having made 959 analyses for moulds and yeasts of cream, butter, packing material and water supplies. Reports covering the analyses are promptly forwarded to the creameries concerned, for the information and guidance of their management, and it is very gratifying to note the interest that continues to be shown in this work, and marked improvements in the sanitary conditions and handling methods have been noted in a number of cases, as a result of it.

II.—THE BUTTER-MARKETING SERVICE.

The following table shows the quantity of creamery butter that has been handled through the department's marketing service during the past five years, the right hand column indicating the proportion which this quantity bears to the total annual creamery butter production for each of these five years:

Year	Pounds of Butter.	Per cent.
1921.....	862,799	6.6
1922.....	1,017,094	6.6
1923.....	1,381,318	7.7
1924.....	1,738,993	8.1
1925.....	951,741	4.9

The falling off in the quantity of butter forwarded to the department for marketing is due largely to the fact that several creameries changed ownership during the year and the purchasers carrying on their own distribution.

A summary is also appended to show the quantity and selling price of the butter which was marketed for the operators of each of the ten creameries who entered into the formal marketing agreement with the department at the beginning of the year. It will be noted that the average selling prices varied considerably for the different creameries. This was due, not only to the relative quality (grades) of the butter so marketed, but also, and chiefly, to the varying price levels of the butter market during the time of the year when the shipments came forward. It may be of interest in this connection to state here that, according to the department's sales records, the first week of March was the low point of the year, when the price of 31½ cents was realized for special grade. The peak was reached by the middle of October, when butter was sold on the basis of 44 cents per pound for specials. From then onwards there was a gradual weakening in the marketing, and prices declined until the figure of 38¼ cents was reached at the close of the year.

SUMMARY OF BUTTER SALES FOR THE YEAR 1925.

Creamery or Shipper.	Pounds of Butter Sold.	Selling Price at Calgary, and Edmonton.	Average Price per Pound, Cents.
Beaver Lake Farmers' Creamery Association, Ryley	10,633	\$ 3,377.36	31.76
Bonnyville Creamery, Ltd., Bonnyville	57,897	20,411.34	35.25
Cardston Creamery Association, Cardston	56	15.40	27.50
Elnora Co-operative Creamery Association, Elnora	154,326	53,175.30	34.46
Falher Creamery, Ltd., Falher	74,265	26,562.18	35.77
Hanna Creamery, Hanna	43,568	13,711.88	31.47
Hartshorn Creamery, Hartshorn	27,933	9,454.12	33.85
Red Deer Creamery, Red Deer	7,392	2,305.52	31.19
Valhalla Co-operative Creamery Association, Valhalla	150,156	52,493.34	34.96
Viking Co-operative Creamery Association, Viking	425,515	153,093.07	35.98
Totals and average	951,741	\$334,599.51	35.15

III.—GRADING OF CREAMERY BUTTER.

Particulars are given in the following statement, showing the quantity and classification of the creamery butter graded during the year by the provincial butter graders stationed at Edmonton and Calgary.

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GRADING OF CREAMERY BUTTER, ALBERTA, 1915-1925.

Year.	Creamery Butter Manufactured, Pounds.	Average Selling Price, Cents.	Creamery Butter Graded by Department of Agriculture.				
			Pounds.	Percentage in each Grade.			
				Special Grade	First Grade	Second Grade	Off Grade
1915.....	7,544,148	26.79	3,600,900	33.0	39.7	24.3	3.0
1916.....	8,521,784	30.74	4,214,312	43.9	41.7	12.9	1.5
1917.....	8,944,171	38.17	4,644,646	56.3	36.3	6.7	.7
1918.....	9,053,237	44.47	5,427,134	50.4	38.6	10.3	.5
1919.....	11,822,890	51.87	6,830,308	29.7	50.8	18.9	.6
1920.....	11,821,291	55.45	6,120,325	19.0	55.6	24.7	.7
1921.....	13,048,493	34.82	5,954,991	7.7	66.7	24.7	.9
1922.....	15,417,070	33.25	7,264,219	27.5	55.0	16.3	1.2
1923.....	17,868,853	32.97	*10,776,318	21.6	64.7	12.6	1.1
1924.....	22,339,857	31.60	*14,954,581	19.9	66.8	12.3	1.0
1925 Est.....	19,500,000	35.25	*11,896,613	18.0	68.3	12.1	1.6

*This figure includes butter given initial grading for Federal Grading Certificates, namely, 1,073,256 pounds in 1923, 905,688 pounds in 1924, and 487,464 pounds in 1925.

The quantity of butter graded in 1925 was considerably less than that of the previous year, due primarily to the reduced total butter output of the creameries. It will be seen also that, in comparison with the figures for 1924, there was a slight falling off in the percentage of the butter graded special, and a corresponding increase in the percentage of first grade. Reference to the statement covering "cream graded" will show the reason.

IV.—CREAM GRADING.

We have now for comparison four annual summaries covering the grading of cream by provincial cream graders. The provincial cream grading service was started in Alberta in the spring of 1922. The figures shown in the table that follows represent approximately 85% of the total cream receipts at the creameries each year; yet they may be accepted as a fairly accurate and comparative picture of the quality of the cream (expressed in terms of grades) from year to year. The figures for 1925 show a slight reduction in the percentage of specials and a corresponding increase in the next lower grades, as compared with the figures for 1924. This condition is reflected in the grades of the butter already referred to, and it is to be hoped that this will prove to be but a passing incident in our dairy development—an incident that will bring those most concerned to a realization of the fact that if our dairy industry is to flourish the responsibility for high quality in our products rests primarily with the initial producer—the dairyman on the farm. Unless he sets himself the task of putting quality into his product while it is still under his control, no one else can do it for him in the subsequent stages of manufacture and marketing. At the same time it is readily conceded that the producer, in

weighing the relative importance of the different departments of his farm enterprise, must, himself, decide whether, and when, he is warranted in giving that care and attention to his dairy products which will ensure a high grade market quality. The great advantage in the present system of marketing cream for buttermaking is that the producer has the opportunity of choosing his market and, to a certain extent, the price based on grade. In view of the tremendous efforts that are now being made in other dairying countries to produce high quality products for both domestic and export market, we here should not allow ourselves to bring up the rear in that respect.

GRADING OF CREAM BY PROVINCIAL CREAM GRADING SERVICE,
ALBERTA.

	1922.	1923.	1924.	1925.
Lbs. Cream Graded	30,778,344	41,824,366	49,612,861	41,758,535
Lbs. Butterfat ...	10,185,277	13,713,758	16,518,954	14,019,009
Average Fat Test	33.1 per cent.	32.8 per cent.	33.3 per cent.	33.6 per cent.
Table Cream	2.3 per cent.	4.1 per cent.	3.3 per cent.	1.7 per cent.
Special Grade ...	32.4 per cent.	39.1 per cent.	42.3 per cent.	39.0 per cent.
First Grade	37.3 per cent.	40.5 per cent.	43.2 per cent.	47.1 per cent.
Second Grade ...	27.2 per cent.	16.1 per cent.	11.0 per cent.	12.0 per cent.
Off Grade .....	.8 per cent.	.2 per cent.	.2 per cent.	.2 per cent.
	100.0 per cent.	100.0 per cent.	100.0 per cent.	100.0 per cent.

V.—CONCLUSION.

In addition to the activities reported in the foregoing, other lines of work were carried on, as in previous years. Four special creamery courses were held, under the joint auspices of the University of Alberta and the Department of Agriculture, with a total registration of 86 students.

I desire, in closing, to acknowledge the loyal and cheerful co-operation of my co-workers in the various activities entrusted to this branch.

Respectfully submitted,

C. P. MARKER,

Dairy Commissioner.

Report of the Field Crops Commissioner

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit herewith the annual report of the field crops branch for the year 1925.

The work of this branch for the year 1925 consisted of the supervision of field crop competitions, combined seed crop and cleaned seed competitions, good farms competitions, local seed fairs, plowing matches, the operation of a central cleaning and grading plant for the handling of registered seed, the securing of markets for Alberta seed, school fairs and weed control and eradication. The provincial seed fair is also operated under this branch. A grain separator cleaning attachment was further perfected and experimented with.

FIELD CROP COMPETITION.

Field crop competitions, combined seed crop and cleaned seed competitions and good farms competitions were held at Lake Saskatoon, Lloydminster, Hanna, Camrose and Sedgewick-Loughheed. Messrs. W. G. Smith, John Norwuy, H. S. McLeod, Geo. Murray, J. R. Watson, L. A. Parry and H. E. Craig judged these competitions. In these competitions there were a large number of entries. The contest in each case was very keen.

PLOWING MATCHES.

Plowing matches were held at Killam, Warspite, Hawkeye, Vegreville, Rochester and Vermilion. Large crowds were in attendance and a great deal of interest manifested. After each plowing match addresses were given by the judges and others. Messrs. A. Paton, F. S. Grisdale, J. Macgregor Smith and W. J. Stephen acted as judges.

PROVINCIAL SEED FAIR.

The Provincial Seed Fair held at Calgary, January 20, 21, 22 and 23, was an excellent display of seed grain, grass, clover seeds, potatoes and corn. Prizes were given for boys and girls exhibits. There was keen competition in every class with the exception of the boys' and girls' classes which were not well filled. An encouraging feature of the provincial seed fair was noted in the care with which practically all of the exhibits were prepared. Many sales were made by exhibitors on this occasion. It was estimated that practically ten thousand people attended the fair. It was held at a time when there were farmers' conventions in the city, which naturally swelled the attendance.

At this time the annual convention of the Alberta Seed Growers' Association was held, when valuable papers were given by prominent agriculturists of Canada. Keen discussions followed after each address.

Practically all the winners and exhibitors at the previous International Grain and Hay Show, Chicago, competed. The competition for the best exhibits made by the agricultural societies was very keen. The Brooks Agricultural Society won first prize.

The following are the prize winners in the various classes at the Provincial Seed Fair:

Zone Class

1 1—*Agricultural Societies Exhibit.*

- 1st, Brooks Agricultural Society.
- 2nd, Bowden Agricultural Society.
- 3rd, High River Agricultural Society.

International Harvester Company's Shield.

Brooks Agricultural Society.

1 4—*Spring Wheat—Marquis.*

- 1st, H. G. L. Strange, Fenn.
- 2nd, Nick Taitinger, Claresholm.
- 3rd, Mahlon Watson, Provost.

1 5—*Spring Wheat—Any Other Variety.*

- 1st, F. Daw, Gleichen.
- 2nd, Mahlon Watson, Provost.
- 3rd, J. R. Hannaford, Howie.

1 6—*Spring Wheat—Registered Marquis.*

- 1st, Nick Taitinger, Claresholm.
- 2nd, H. G. L. Strange, Fenn.
- 3rd, Grenville & Shearer, Morrin.
- 4th, B. R. Lommatzsch, Vulcan.
- 5th, Mahlon Watson, Provost.
- 6th, J. R. Hannaford, Howie.
- 7th, A. C. B. Grenville, Morrin.
- 8th, Arthur Gosling, Dalemead.

2 9—*Spring Wheat—Red Fife.*

- 1st, A. Lougheed, Bowden.

2 10—*Spring Wheat—Marquis.*

- 1st, D. S. Lougheed, Knee Hill Valley.
- 2nd, Ole Ellehill, Huxley.
- 3rd, J. Tyler, Bowden.

2 11—*Spring Wheat—Any Other Variety.*

- 1st, H. B. Enegstler, Bowden.
- 2nd, Jos. Berry, Fedorah.

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Field crop competitions, combined seed crop and cleaned seed competitions and good farms competitions were held at Lake Saskatoon, Lloydminster, Hanna, Camrose and Sedgewick-Loughheed. Messrs. W. G. Smith, John Norwuay, H. S. McLeod, Geo. Murray, J. R. Watson, L. A. Parry and H. E. Craig judged these competitions. In these competitions there were a large number of entries. The contest in each case was very keen.

PLOWING MATCHES.

Plowing matches were held at Killam, Warspite, Hawkeye, Vegreville, Rochester and Vermilion. Large crowds were in attendance and a great deal of interest manifested. After each plowing match addresses were given by the judges and others. Messrs. A. Paton, F. S. Grisdale, J. Macgregor Smith and W. J. Stephen acted as judges.

PROVINCIAL SEED FAIR.

The Provincial Seed Fair held at Calgary, January 20, 21, 22 and 23, was an excellent display of seed grain, grass, clover seeds, potatoes and corn. Prizes were given for boys and girls exhibits. There was keen competition in every class with the exception of the boys' and girls' classes which were not well filled. An encouraging feature of the provincial seed fair was noted in the care with which practically all of the exhibits were prepared. Many sales were made by exhibitors on this occasion. It was estimated that practically ten thousand people attended the fair. It was held at a time when there were farmers' conventions in the city, which naturally swelled the attendance.

At this time the annual convention of the Alberta Seed Growers' Association was held, when valuable papers were given by prominent agriculturists of Canada. Keen discussions followed after each address.

Practically all the winners and exhibitors at the previous International Grain and Hay Show, Chicago, competed. The competition for the best exhibits made by the agricultural societies was very keen. The Brooks Agricultural Society won first prize.

The following are the prize winners in the various classes at the Provincial Seed Fair:

Zone Class

1 1—*Agricultural Societies Exhibit.*

- 1st, Brooks Agricultural Society.
- 2nd, Bowden Agricultural Society.
- 3rd, High River Agricultural Society.

International Harvester Company's Shield.

Brooks Agricultural Society.

1 4—*Spring Wheat—Marquis.*

- 1st, H. G. L. Strange, Fenn.
- 2nd, Nick Taitinger, Claresholm.
- 3rd, Mahlon Watson, Provost.

1 5—*Spring Wheat—Any Other Variety.*

- 1st, F. Daw, Gleichen.
- 2nd, Mahlon Watson, Provost.
- 3rd, J. R. Hannaford, Howie.

1 6—*Spring Wheat—Registered Marquis.*

- 1st, Nick Taitinger, Claresholm.
- 2nd, H. G. L. Strange, Fenn.
- 3rd, Grenville & Shearer, Morrin.
- 4th, B. R. Lommatzsch, Vulcan.
- 5th, Mahlon Watson, Provost.
- 6th, J. R. Hannaford, Howie.
- 7th, A. C. B. Grenville, Morrin.
- 8th, Arthur Gosling, Dalemead.

2 9—*Spring Wheat—Red Fife.*

- 1st, A. Lougheed, Bowden.

2 10—*Spring Wheat—Marquis.*

- 1st, D. S. Lougheed, Knee Hill Valley.
- 2nd, Ole Ellehill, Huxley.
- 3rd, J. Tyler, Bowden.

2 11—*Spring Wheat—Any Other Variety.*

- 1st, H. B. Enegstler, Bowden.
- 2nd, Jos. Berry, Fedorah.

Zone Class

2 12—*Spring Wheat—Registered Marquis.*

- 1st, P. J. Rock, Morrin.
 2nd, M. McHardy, Carbon.
 3rd, A. Lougheed, Bowden.

2 13—*Spring Wheat—Registered—Any Other Variety.*

- 1st, Robt. McAllister, Eldorena.

14—*Hand Selected Wheat.*

- 1st, Nick Taitinger, Claresholm.
 2nd, H. G. L. Strange, Fenn.
 3rd, A. Gosling, Dealmead.

15—*Grand Championship Wheat.*

- Nick Taitinger, Claresholm.

Alberta Pacific Grain Co., Ltd., Special.

- Nick Taitinger, Claresholm.

1 18—*Victory, etc., Medium Length Oats.*

- 1st, Wm. Wood, Sedgewick.
 2nd, H. G. L. Strange, Fenn.
 3rd, G. A. Pole, Airdrie.

1 19—*Registered Oats.*

- 1st, E. C. Wagner, Nanton.
 2nd, H. G. L. Strange, Fenn.

2 20—*Banner, etc., Long Slim Oats.*

- 1st, A. Lougheed, Bowden.
 2nd, Jos. Berry, Fedorah.
 3rd, C. C. Hayes, Bowden.

2 21—*Victory, etc., Medium Length Oats.*

- 1st, D. S. Lougheed, Kneehill Valley.
 2nd, Richard Harrison, Ohaton.
 3rd, J. R. Tattersall, Vermilion.

2 22—*Registered Oats.*

- 1st, Anton Nelson, Colinton.
 2nd, Robt. McAllister, Eldorena.
 3rd, A. Lougheed, Bowden.
 4th, J. R. Tattersall, Vermilion.
 5th, Jos. Berry, Fedorah.
 6th, T. E. Seale, Tofield.
 7th, M. McHardy, Carbon.
 8th, J. W. Christian, Red Deer.

23—*Hand Selected Oats.*

- 1st, J. W. Lucas, Calgary.
 2nd, Chas. A. Scheetz, Shepard.
 3rd, T. E. Seale, Tofield.

Zone Class

- 24—*Grand Championship Oats.*
Chas. A. Scheetz, Shepard.
- 25—*United Grain Growers, Ltd., Special.*
Chas. A. Scheetz, Shepard.
- 1 26—*Six-Rowed Barley.*
1st, J. W. Lucas, Calgary.
- 2 29—*Six-Rowed Barley.*
1st, Ben Berry, Fedorah.
2nd, A. Lougheed, Bowden.
3rd, R. A. Meeks, Manville.
- 2 30—*Two-Rowed Barley.*
1st, A. Lougheed, Bowden.
2nd, Ben Berry, Fedorah.
3rd, A. R. Hoag, Bowden.
- 32—*Hand Selected Barley.*
1st, A. Lougheed, Bowden.
2nd, Ben Berry, Fedorah.
3rd, Ben Berry, Fedorah.
- 33—*Grand Championship Barley*
J. W. Lucas, Calgary.
- 2 36—*Registered Six-Rowed Barley.*
1st, Ben Berry, Fedorah.
- 38—*Field Peas.*
1st, H. G. L. Strange, Fenn.
2nd, J. W. Lucas, Calgary.
3rd, Wm. Perry, Cayley.
4th, Wm. Lucas, Calgary.
- 39—*Flax Seed.*
1st, Wm. Stedman, Brooks.
2nd, R. A. Meeks, Manville.
3rd, A. Lougheed, Bowden.
- 40—*Winter Rye.*
1st, Wm. Perry, Cayley.
2nd, J. W. Lucas, Calgary.
3rd, R. A. Meeks, Manville.
4th, Wm. Lucas, Calgary.
- 42—*Timothy Seed.*
1st, A. Lougheed, Bowden.
2nd, W. O. Neuman, Pincher Creek.
3rd, R. Lang, Pincher Creek.
4th, Evans & Heppner, Pincher Creek.

Zone Class

43—*Brome Grass Seed.*

- 1st, Wm. Lucas, Calgary.
2nd, Wm. Perry, Cayley.

44—*Western Rye Grass Seed.*

- 1st, Wm. Perry, Cayley.
2nd, Wm. Lucas, Calgary.

47—*Registered Grimm's Alfalfa.*

- 1st, Don H. Bark, Brooks.
2nd, Don Losey, Cassils.
3rd, Nick Cheltze, Rainier.
4th, J. Tourangeau, Brooks.
5th, G. H. Homann, Cassils.
6th, J. Cerny, Duchess.
7th, A. W. Austin, Rainier.
8th, W. Tait White, Brooks.

48—*Alfalfa Seed.*

- 1st, E. O. Boyd, Rife.

50—*Sunflower Seed.*

- 1st, M. C. Sarsons, Brooks.
2nd, L. U. Fowler, Calgary.

52—*Corn, Dakota White Flint.*

- 1st, A. E. Treece, Purple Springs.
2nd, D. W. Treece, Purple Springs.
3rd, W. M. Treece, Purple Springs.

53—*Corn, Gehu White Flint.*

- 1st, D. W. Treece, Purple Springs.
2nd, R. P. Ripley, Atlee.
3rd, W. M. Treece, Purple Springs.
4th, A. E. Treece, Purple Springs.

54—*Corn, North Western Dent.*

- 1st, John McCullough, Brooks.
2nd, D. W. Treece, Purple Springs.
3rd, A. E. Treece, Purple Springs.
4th, W. M. Treece, Purple Springs.
5th, Jos. J. Muza, Empress.
6th, G. H. Homann, Cassils.

55—*Corn, Squaw and Improved Squaw.*

- 1st, J. Gray, Brooks.
2nd, C. C. Elliott, Brooks.

56—*Corn, Any Other Flint Variety*

- 1st, Jos. J. Muza, Empress.
2nd, Chas. Rick, Cassils.
3rd, John McCullough, Brooks.

Zone Class

58—*Corn, Sweet Corn.*

- 1st, R. A. Meeks, Manville.
- 2nd, Chas. Rick, Cassils.
- 3rd, C. Cross, Brooks.
- 4th, M. C. Sarsons, Brooks.
- 5th, W. Owens, Brooks.

59—*Corn, Pop Corn.*

- 1st, C. Pope, Brooks.
- 2nd, John Dickie, Brooks.
- 3rd, J. Mackintosh, Brooks.
- 4th, J. Ross, Brooks.
- 5th, F. Gibson, Brooks.

60—*Field Beans, White.*

- 1st, A. Griffin, Brooks.
- 2nd, M. C. Sarsons, Brooks.
- 3rd, B. Miles, Patricia.
- 4th, J. B. Romans, Rainier.
- 5th, Jos. J. Muza, Empress.

61—*Field Beans, Colored.*

- 1st, C. Cross, Brooks.
- 2nd, G. H. Homann, Cassils.
- 3rd, C. Pope, Brooks.
- 4th, J. Gray, Brooks.

62—*Potatoes—Irish Cobler.*

- 1st, F. T. Rickett, Strathcona.
- 2nd, Bliss Roberts, Raymond.

63—*Potatoes—Early Ohio.*

- 1st, R. G. Bolt, Olds.
- 2nd, F. T. Rickett, Strathcona.
- 3rd, John McCullough, Brooks.

64—*Potatoes—Wee MacGregor.*

- 1st, Chas. Charmers, Brooks.
- 2nd, J. McK. Hughes, Vegreville.
- 3rd, W. B. Pattenson, Calgary.

65—*Potatoes—Gold Coin.*

- 1st, W. B. Pattenson, Calgary.

66—*Potatoes—Netted Gem.*

- 1st, A. Garrow, Brooks.
- 2nd, John McCollough, Brooks.
- 3rd, A. Smart, Patricia.

67—*Potatoes—Any Other Variety.*

- 1st, F. T. Rickett, Strathcona.
- 2nd, R. G. Bolt, Olds.
- 3rd, Chas. Rick, Cassils.

Zone Class

68—*Potatoes—Certified.*

- 1st, F. T. Rickett, Strathcona.
- 2nd, A. Garrow, Brooks.
- 3rd, Bliss Roberts, Raymond.
- 4th, Frank Niedermeier, Lethbridge.

69—*Silage.*

- 1st, F. A. Wonnacott, DeWinton.
- 2nd, Nelson S. Smith, Olds.
- 3rd, Don Losey, Cassils.

70—*Vegetable and Flower Seed Collection.*

- 1st, M. C. Sarsons, Brooks.
- 2nd, Chas. Charmers, Brooks.
- 3rd, L. U. Fowler, Calgary.

71—*Grimm Alfalfa Seed Growers' Association—Trophy.*

- D. H. Bark, Brooks.

BOYS' AND GIRLS' SECTION.

72—*Wheat.*

- 1st, Myrtle Thompson, Barons.
- 2nd, Martin Thompson, Barons.
- 3rd, Helen Bowler, Sedgewick.

73—*Oats.*

- 1st, Emil E. Olson, Hardisty.
- 2nd, Myrtle Thompson, Barons.
- 3rd, Alice Bowler, Sedgewick.
- 4th, Harriet Bowler, Sedgewick.

74—*Barley.*

- 1st, Helen Bowler, Sedgewick.
- 2nd, Harriet Bowler, Sedgewick.

79—*Weed Collection.*

- 1st, Francis Hayes, Olds.
- 2nd, Hilda Galpin, Strathmore.
- 3rd, Thos. Taylor, Strathmore.
- 4th, Milton Danlly, Strathmore.
- 5th, Lewie Minsaas, Rosemary.

80—*Essay on Weed Control and Eradication.*

- 1st, Harriet Bowler, Sedgewick.
- 2nd, Nellie Galpin, Strathmore.
- 3rd, Helen Bowler, Sedgewick.
- 4th, Hilda Galpin, Strathmore.
- 5th, May Taylor, Strathmore.

81—*Commercial Life Assurance Company—Trophy.*

- H. G. L. Strange, Fenn.

Zone Class

82—*Commercial Life Assurance Company—Specials.*

E. C. Wagner, Nanton—Oats.

Nick Taitinger, Claresholm—Wheat.

An excellent display of grasses and grains, threshed and in the sheaf was put up by the publicity branch of the Department of Agriculture. The Canadian Pacific Railway, Department of Natural Resources, Brooks, also displayed a wonderful collection of products raised on irrigated farms. The Calgary Vacant Lots Garden Club had a very creditable display. The Dominion Seed Branch, Calgary, put up an educational exhibit revealing the different activities of the branch. Many favorable comments were passed on the merits of the exhibits, which were educational, revealing the wonderful possibilities in the way of agricultural production in the Province of Alberta.

PREMIUM WINNERS AT THE CHICAGO INTERNATIONAL GRAIN AND HAY SHOW.

The fields crops branch arranged to have all exhibits come to the government cleaning and grading plant, from which place they were shipped at government expense to the International Grain and Hay Show in Chicago. Mr. H. A. Craig, deputy minister of agriculture, had charge of the exhibits in Chicago for the Province. The following prizes were won by Alberta exhibitors:

Hard Red Spring Wheat.

11th, H. N. Fisher, Sedalia.

20th, Nick Taitinger, Claresholm.

26th, P. J. Rock, Morrin.

Oats.

14th, A. E. Barnes, Nemiskam.

18th, A. Lougheed, Bowden.

19th, Anton Nelson, Colinton.

Reserve, Grenville's & Shearer, Morrin.

Rye.

7th, R. A. Meeks, Manville.

Timothy.

2nd, A. Lougheed, Bowden.

6th, Jno. F. Bonertz, Pincher Creek.

8th, Alfred Pelletier, Pincher Creek.

13th, F. E. Neuman, Pincher Creek.

14th, W. O. Neuman, Pincher Creek.

15th, A. Jack, Pincher Creek.

Reserve, H. Levasseur, Pincher Creek.

Field Peas—Small Yellow.

1st, J. T. Hill, Lloydminster.

2nd, Mrs. M. E. Graham, Riverton.

LOCAL SEED FAIRS.

Agricultural societies holding local seed fairs with dates and judges, were as follows:

Olds School of Agriculture, Experimental Union	January 5th,	F. H. Reid W. J. Stephen
Bowden	January 14th	F. S. Grisdale
Camrose	January 31st	W. J. Stephen
Lake Saskatoon	February 20th	A. R. Judson
Lloydminster	February 23rd and 24th	W. J. Stephen
Vermilion	February 26th	E. C. Hallman
Vegreville	March 7th	W. J. Stephen
Chauvin	February 28th	W. G. Townsley
Berwyn	March 17th	Mr. Murray
Leduc	December 15th	W. J. Stephen

For the most part the number of entries at these fairs was not large, but the quality was good. Local seed fairs have been responsible for bringing out a large number of exhibitors who afterwards decided to compete in the larger shows in Canada and the United States. It is to be regretted that more agricultural societies do not see their way clear to hold more local seed fairs.

NOXIOUS WEED WORK.

During the year 1925 seventeen field supervisors were appointed. These men were allotted definite areas of the Province to work in. For the first time two field supervisors were placed in the Peace River district. The field supervisors interviewed councillors and individual farmers, secretaries of agricultural societies, town councils, secretaries and executives of local U.F.A.'s, and other local organizations. The co-operation of each and every one was solicited, the idea being, not so much to compel farmers to keep their weeds under control, but rather to educate and get community action. This policy proved popular and effective. The number of municipal districts showing active interest in weed control is greatly increasing, until now it is estimated that approximately 90% of all municipal districts in the province are doing something material in the way of effecting weed control. A large number of public meetings were held throughout the Province when subjects dealing with good farming were treated with, it being forcibly brought out by the speakers and in the discussions that if crop rotations and diversified agriculture were substituted for straight grain-growing, that the weed menace of the Province would eventually be reduced to a minimum. Special emphasis was given to the eradication of perennial sow thistle. The public was urgently requested to be on the look out for this weed, with the object of eradicating it before it would spread.

Municipalities, towns, cities, railroad companies and irrigation companies are to be commended on the excellent co-operation afforded to the Department of Agriculture in weed control. It is to be hoped that even greater effort will be put forth in the future.

GRAIN SEPARATOR CLEANING ATTACHMENT.

The grain separator cleaning attachment which was experimented with and demonstrated in 1924 was further perfected and demonstrated in 1925. Very encouraging results were obtained. It is expected that in the very near future this machine will be perfected to the place where the government will be warranted in recommending it to the public.

GOVERNMENT CLEANING AND GRADING PLANT.

The Provincial government cleaning and grading plant ended its third year of operation on May 31st, 1925. Forty-five thousand, six hundred and seventy-two bushels of registered wheat and oats passed through the plant, where it was cleaned, graded, sacked and sold. This quantity was made up of:

Marquis wheat	14,089 bu.
Ruby wheat	1,331 bu.
Victory oats	18,645 bu.
Banner oats	11,607 bu.

All screenings from wheat and oats were profitably disposed of. The Dominion government inspector inspected each sack, sealed it and attached to it the Dominion government registration certificate. A market was obtained for this seed in the United States, Alberta, Saskatchewan, Manitoba, Ontario, British Columbia and Yukon territory. Over 800 Alberta farmers purchased registered seed for the 1925 crop. The support and encouragement given to the registered seed industry the past year by farmers of Alberta is most gratifying. The plant has attempted at all times to turn out seed that is clean, true to type and of high germination.

The field crops commissioner, being a director of the Canadian Seed Growers' Association, attended the annual convention of the Canadian Seed Growers' Association held at the University of Alberta, Edmonton, in June. Many subjects of interest to producers of registered seed were discussed.

ALBERTA SEED GROWERS' ASSOCIATION.

The executive of the Alberta Seed Growers' Association appointed at the time of the annual convention of the Alberta seed growers, which was held at the time of the Provincial Seed Fair, acts in an advisory capacity to the Department of Agriculture in the management of the registered seed plant. Meetings of the executive are held in Edmonton at the Department of Agriculture from time to time throughout the year.

The executive consists of: President, H. G. L. Strange; vice-president, G. M. Stewart; secretary-treasurer, W. J. Stephen; directors, D. H. Bark, A. C. B. Grenville and H. N. Fisher.

SCHOOL FAIRS.

In 1925 there were held in the Province of Alberta 108 school fairs in the following inspectorates: Bassano, Calgary, Camrose, Coronation, Edmonton, Foremost, High River, Lamont, Lethbridge, Macleod, Medicine Hat, Olds, Onoway, Oyen, Peace River, Red Deer, Stettler, St. Paul, Trochu, Vegreville, Vermilion, Wainwright, Westlock, and Wetaskiwin. Approximately 40,000 Alberta children are now engaged in school fair work.

The field crops branch has general supervision of this work in the Province. The details of the work locally are handled by the following: W. J. Elliott, principal, School of Agriculture, Vermilion; A. W. Foley, Department of Agriculture, Edmonton; F. H. Newcombe, district agriculturist, Vegreville; H. W. Scott, district agriculturist, Sedgewick; F. S. Grisdale, principal, School of Agriculture, Olds; S. H. Gandier, principal, School of Agriculture, Claresholm. These men worked in close touch with the school inspectors and with the provincial department of education.

The following seeds were supplied by the Department of Agriculture to the various school fair centres:

Beets	1,150 lbs.
Carrots	645 lbs.
Peas	4,050 lbs.
Mangels	1,200 lbs.
Turnips	430 lbs.
Parsnips	473 lbs.
Sweet Peas	575 lbs.
Cabbage	6,984 pkts.
Asters	21,000 pkts.
Poppies	20,950 pkts.

The department supplies judges for the various school fairs held in the fall and in addition supplies printed instructional circulars, entry tags, prize cards, mounting cards and insect pins for plant and insect collections.

Two-thirds of the money for livestock prizes is also paid by the department, providing this portion does not exceed \$75.00 for each school fair centre.

In 1925 there were approximately 165,000 entries at the school fairs. This will give some idea as to the large number of children who competed.

The Department of Agriculture issued a diploma to the school obtaining the highest number of points per pupil enrolled March 15 in any school fair on the entries in agriculture and home economics classes. The Department of Education also issues a diploma to the school obtaining the highest number of points per pupil enrolled March 15 in any school fair on the entries in school work.

Scholarship short courses were held at Olds and Claresholm in July of 1925 for the boy and girl from each school fair centre who stood highest in the 1924 local school fair. These courses were well attended and proved profitable to those attending.

Detailed reports on school fairs will be submitted elsewhere by S. H. Gandier, principal, School of Agriculture, Claresholm; F. S. Grisdale, principal, School of Agriculture, Olds; W. J. Elliott, principal, School of Agriculture, Vermilion; H. W. Scott, district agriculturist, Sedgewick, and F. H. Newcombe, district agriculturist, Vegreville. The following is the detailed statement regarding school fairs in the Edmonton district submitted by Mr. A. W. Foley, who is in charge of the work for the said district.

"The school fair work in the various districts was fully maintained as in former years and the interest taken by the children in preparing their exhibits was very marked. The improvement is no doubt due largely to their experience of former years.

"The usual school fair supplies were sent to pupils of the various school fair centres as follows:

School Fair.	No. of Schools.	No. Boys.	No. Girls.	Total
Chipman.....	8	120	146	266
Bruderheim.....	12	150	136	286
Ellerslie.....	3	40	33	73
Sturgeon.....	10	100	110	210
Clover Bar.....	12	83	92	175
Legal.....	10	123	111	234
Leduc.....	15	199	171	370
Round Hill.....	6	79	86	165
Fort Saskatchewan..	16	235	245	480
Waskateneau.....	6	79	86	165
Morinville.....	13	143	154	297
Ryley.....	6	69	82	151
Clyde.....	3	36	48	84
Radway Centre.....	7	127	112	239
Andrew.....	8	145	161	306
	135	1,724	1,773	3,497

"Owing to unavoidable local conditions the fairs were not held at Clyde and Ellerslie.

"While there were large entries in most of the classes at the majority of the fairs, and the fairs well attended, there was considerable handicap due to unfavorable weather conditions as rain was experienced during the day at many of the fairs held.

"A swine club competition was held at the Sturgeon school fair where there was a large exhibit of an excellent type of pigs. Singing competition by schools was held at Andrew, and at Morinville competitions in physical drill. Special mention might be made generally of school work, flowers, vegetables and livestock.

"At most of the fairs, the judges, after placing the awards gave short talks on the classes judged, demonstrating where possible, the desirable requirements in the exhibits. At a few of the fairs there was some confusion in judging, and disappointment to exhibitors owing to a local prize list having been printed. Some of the exhibitors followed the official prize list as published in the school fair bulletin while others made their entries from the local

prize list. From observation I am of the opinion much better results would be obtained if, in all centres, the suggested prize list published in the school fair bulletin was followed.

"The school fair scholarship course was again a popular prize and all the winners of the 1924 competition, some 36 in number, took advantage of the trip to Olds School of Agriculture.

"Arrangements were made to assemble the winning boys and girls of this and the Vermilion district at Edmonton where a special car was chartered to transport them to Olds. Owing to the train leaving Monday morning at 7 o'clock, it was necessary to bring the majority of the boys and girls to Edmonton on the previous Saturday. This was successfully accomplished. All incoming train were met, the girls being escorted to the Y.W.C.A. and the boys to the Corona hotel, where they were carefully supervised.

"Early Monday morning some 70 smiling boys and girls, full of anticipation boarded their special car and accompanied by a representative of the department left for Olds. At Wetaskiwin they were joined by 24 other boys and girls, winners of the course from the Sedgewick district.

"On the following Saturday they made the return journey full of praise for the scholarship course. On arrival at Edmonton they were placed on their respective trains for home without an accident of any kind to mar their outing."

Respectfully submitted,

W. J. STEPHEN,

Field Crops Commissioner.

Report of the Game Commissioner

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit the annual report of this branch, covering the administration of The Game Act and The Prairie Fires Act for 1925.

REVENUE.

The revenue collected by this branch of your department for the past year has not been up to expectations, being somewhat less than that for the previous year, and while the amount collected is far in excess of any year prior to 1924, it would have been quite close to the 1924 total, if there had not been a falling off in fur tax collections, due to less fur being marketed, and also due to the fact that the weather during the open season for game birds was anything but favorable. While there was an increase in the number of resident big game and resident trappers' licenses sold, as compared with 1924, this was not sufficient to offset the falling off in revenue from fur tax and resident game bird licenses. The total amounts to \$188,850.89, while the expenditure was \$27,031.28, leaving a surplus of \$91,819.61.

I have reason to believe that a greater revenue would be obtained from the sale of game licenses, if we had a sufficient staff of salaried officers during the hunting season, to not only see that the provisions of the Act were observed, but to check up hunters who may be hunting without the required license. It is also realized that considerable evasion of the requirements of the Act, with respect to fur dealers' and travelling fur dealers' licenses takes place.

BIG GAME ANIMALS.

The illegal killing of antelope was reported from southern districts, but in spite of this there appears to be a slight increase in their number.

Moose are quite plentiful in all districts frequented by them.

Elk.—These are being illegally killed in the areas where they are at present found, and it is doubtful if there has been any increase in their numbers for several years.

GAME BIRDS.

Partridge (Ruffed Grouse).—These valuable game birds are extremely scarce and should be given one or two years close season.

Prairie Chicken (Sharp-tailed Grouse).—In 1924 these birds were very unevenly distributed and while they are still plentiful, many reports were received as to the scarcity in many localities. This condition is more noticeable for 1925. The flocks appear to be much larger than in 1924 and the scarcity in a great many districts is more noticeable, and while there is a splendid supply of breeding stock left, the action of the birds indicates that an unsettled condition exists, and it is possible that they will shift to new feeding grounds as they have done on previous occasions.

In 1926, as well as in 1906 and 1896, these birds were extremely scarce, but it is believed and in fact, reported that they shifted to the timbered areas and it was several years before they again became plentiful in the settled areas and where sportsmen usually do their hunting. This periodical scarcity of sharp-tailed and ruffed grouse can not be accounted for. While many theories have been advanced, no person is prepared to state positively that their theory is correct.

European Grey Partridge (commonly called Hungarian Partridge).—This splendid game bird is still increasing and appearing in areas where it has not been previously found. Like the sharp-tailed grouse it is a great destroyer of weed-seeds, worms and insects and is consequently, a very valuable bird to the farmer and to farming interests. Some are of the opinion that these birds are responsible for the scarcity of sharp-tailed grouse. I am of the opinion that this is not correct, as the scarcity of sharp-tails has occurred on previous occasions and before the European Grey Partridge was introduced into the Province.

For years 1906 to 1920 see previous reports.

The number of big game animals killed by licensed hunters, reported by them in accordance with The Game Act, between 1921 and 1925, are as follows:

	1921..	1922.	1923.	1924.	1925.
Moose	1,018	913	816	1,031	.....
Caribou.....	68	45	50	38	.....
Mtn. Sheep	108	92	61	62	.....
Mtn. Goat	47	44	41	42	.....
Deer	1,120	1,180	1,083	1,541	.....

BRANDING GAME HEADS.

For years 1906 to 1920 see previous reports.

Section 11 of the Act requiring the branding of game heads before buying and selling shows the following results:

	1921.	1922.	1923.	1924.	1925.
Mtn. Sheep	7	14	11	11	1
Mtn. Goat .....	.....	2	4	9	2
Elk	1	1	1	.....	1
Moose	7	9	5	9	9
Caribou.....	1	.....	.....	2	.....
Deer	5	17	15	11	12
Antelope	1	4	.....	.....	.....

For years 1906 to 1920 see previous reports.

The following tables show the number of licenses and permits sold each year from 1921 to 1925, inclusive:

	1921.	1922.	1923.	1924.	1925.
General Game (Non-resident)	69	67	53	98	117
Non-resident, Special .....	....	49	41	53	84
Bird Game (Non-resident)	51	63	23	41	53
Trappers (Non-resident)	4	1	5	7	2
Non-resident Bear Permits	19	27	30	40	36
Resident Big Game	1,138	4,062	3,346	4,927	5,734
Resident Special .....	....	128	147	231	198
Resident Bear Permits .....	....	7	9	15	17
Resident Bird Game	12,459	10,280	9,866	10,943	8,458
Resident Trappers .....	....	....	2,112	2,598	3,283
Permits to Trap on Forest Reserve ...	27	51	51	50	108
Permits to Trap Beaver	179	209	141	74	72
Permits to Trap Muskrat	425	714	181	166	189
Guide's Licenses	49	66	43	65	66
Permits to Export	163	115	117	103	78
Permits to Collect	6	4	9	38	67
Game Head Permits	21	47	37	42	25
Taxidermist's Licenses	19	21	20	13	19
Cold-Storage Licenses .....	....	....	2	2	2
Exporter's Licenses	128	103	74	....	....
Non-resident Wholesale (10-day) Fur Buyer's .....	....	....	5	12	20
Non-resident Fur Dealer's	3	8	4	....	5
Resident Fur Buyers	52	89	55	....	....
Resident Fur Dealers	454	566	860	384	396
Resident Travelling Fur Dealers ....	....	....	26	175	212
Non-resident Travelling Fur Dealers ..	....	....	....	3	....

KIND, NUMBER, TOTAL VALUE AND AVERAGE VALUE OF PELTS OF
FUR-BEARING ANIMALS TAKEN IN THE PROVINCE OF ALBERTA
DURING THE SEASON 1924-1925.

Kind.	Number of Pelts.	Total Value of Pelts.	Average Value per Pelt
Badger	3,008	\$ 6,016.00	\$ 2.00
Beaver	18,747	374,940.00	20.00
Wolverine	255	3,825.00	15.00
Squirrel	114	11.40	.10
Ermine	60,150	60,150.00	1.00
Otter	352	8,800.00	25.00
Lynx	7,066	141,320.00	20.00
Marten	3,046	76,150.00	25.00
Skunk	6,470	16,175.00	2.50
Bear	1,363	10,904.00	8.00
Fisher	78	5,460.00	70.00
Fox (Silver)	1,179	88,425.00	75.00
Fox (Cross)	7,416	222,480.00	30.00
Fox (Red)	14,184	212,760.00	15.00
Fox (Kit)	747	2,241.00	3.00
Fox (Blue)	1	75.00	75.00
Fox (White)	47	1,410.00	30.00
Muskrat	271,633	271,633.00	1.00
Mink	11,928	89,460.00	7.50
Wolf (Prairie)	42,665	426,650.00	10.00
Wolf (Timber)	283	4,245.00	15.00
Rabbit	152,673	7,633.65	.05
Total	603,405	\$2,030,764.05	

Moose	37
Deer	40
Caribou	1
Mountain Sheep	4
Mountain Goat	2
Gophers (approximately)	200

The following table shows pelts of wild animals exported from Alberta during the season 1924-1925.

Kind.	Number of Pelts.	Total Value of Pelts.	Average Value of Pelts.
Badger	3,207	\$ 6,414.00	\$ 2.00
Beaver	25,726	514,520.00	20.00
Wolverine	350	5,250.00	15.00
Squirrel	443	44.30	.10
Ermine (Weasel)	73,027	73,027.00	1.00
Otter	843	21,075.00	25.00
Lynx	11,638	232,760.00	20.00
Marten	20,015	500,375.00	25.00
Skunk	8,465	21,162.50	2.50
Bear	1,963	15,704.00	8.00
Fisher	285	19,950.00	70.00
Rabbit	172,267	8,613.35	.05
Wolf (Timber)	326	4,890.00	15.00
Wolf (Prairie)	48,376	483,760.00	10.00
Fox (Blue)	15	1,125.00	75.00
Fox (Silver)	1,554	116,550.00	75.00
Fox (Cross)	9,693	290,790.00	30.00
Fox (Red)	21,235	318,525.00	15.00
Fox (Kit)	674	2,022.00	3.00
Fox (White)	3,936	118,080.00	30.00
Muskrat	450,060	450,060.00	1.00
Mink	32,183	241,372.50	7.50
Total number of pelts	886,281	\$3,446,069.65	

CONVICTIONS.

Penalties imposed and collected during the year 1925 amounted to \$1,799.60.

DESTRUCTION OF CROWS, MAGPIES, ETC.

I have the honour to report as follows on the "Destruction of Crows, Magpies and Gophers," as provided for by order-in-council 594/25.

It is generally accepted that crows, magpies and gophers are classified as vermin and as such, are a menace to agriculture. It is maintained by sportsmen that the crow is very destructive to game, song and insectivorous birds and it is well known that these birds not only destroy the young of beneficial species but their eggs as well.

While magpies are not as numerous as crows, individually they are equally as destructive.

The gopher is also destructive, more particularly to farm crops and any inducement to farmers' boys or others to encourage the destruction of these pests is unquestionably justifiable.

The competition for the destruction of these pests has proven very satisfactory. The results secured being beyond expectations.

The total number of birds, animals and eggs destroyed were as follows:

Crows and Magpies.
38,275

Gophers.
195,525

Crows' and Magpies' Eggs.
70,002

Respectfully submitted,

BENJ. LAWTON,

Game Commissioner.



GAME EXHIBIT OF THE ALBERTA GOVERNMENT

Prairie Fires Report, 1925

The prairie and forest fire situation for 1925 was much better than usual, very few fires of any size occurring, and while there was the usual number of small fires, many of which were allowed to escape from control, the conditions were such that no excessive damage resulted.

Climatic conditions during the spring and fall were not conducive towards a fire menace. The spring being somewhat late, surface moisture prevented fires from running as freely as otherwise would have been the case. The same conditions existed during the fall.

INSPECTION OF RAILWAY FIRE-GUARDS, 1925.

The usual inspection of railway fireguards and right-of-way was made and it is pleasing to know that the railway companies are co-operating and thereby endeavoring to eliminate the fire menace which existed some years ago due to improperly constructed fireguards and failing to clear the right-of-way of inflammable matter, and while climatic conditions in the fall of 1925 were such that in many cases it was impossible to burn the grass from the right-of-way, it is expected that this will be attended to during the coming spring and that all necessary precautions will be taken to prevent the spread of fires from railways.

The convictions reported and the total penalties imposed under The Prairie Fires Act for the year 1915 to 1925, are as follows:

Year.	No. of Convictions Reported.	Total.	Average Fine.
1915.....	39	\$ 681.16	\$17.47
1916.....	113	2,121.19	18.77
1917.....	35	888.00	25.37
1918.....	40	946.90	23.67
1919.....	35	958.50	24.55
1920.....	11	224.60	20.41
1921.....	...	445.25	.....
1922.....	44	750.00	17.04
1923.....	...	541.70	.....
1924.....	81	1,181.50	14.58
1925.....	....	462.50	.....

Respectfully submitted,

BENJ. LAWTON,

Chief Fire Inspector.

Report of the Poultry Commissioner

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit herewith the report of the Poultry Branch for the year 1925.

The period covered by this report is one which has a number of outstanding features. It will be remembered by producers as a season of good demand and good prices, but by produce dealers as perhaps the most disastrous in their experience. The storage pack of the previous year was an unusually profitable one to the dealers and it seems that this was largely responsible for an undue eagerness to accumulate storage stocks in 1925 and a readiness to pay more than the eastern market would at the time warrant. The prices in the west were frequently several cents higher than current values in Montreal. The dealers were buying and holding in anticipation of an improvement in the market and in spite of much heavier storage holdings than usual this anticipated improvement was almost realized but, the subsequent mildness of the weather with its resultant heavier winter production upset all calculations and in the earlier part of 1926 the storage egg market collapsed and heavy losses were taken by dealers everywhere.

EGG EXPORTS.

In 1925, there were 13,009 cases of fresh eggs and 7,598 cases of storage eggs shipped to points outside of the province. In addition there were 6,132 cases of the 1925 storage pack shipped east in the early part of 1926. This makes a total of 53 car loads, reckoning 500 cases to the car. The exports in 1924 were 133 cars and in 1923 106 cars, but this comparison does not reflect the exact situation in regard to production as in 1925 there were fewer eggs imported than usual. These consisted of 999 cases of Chinese eggs and 2,069 cases of American eggs. The inference is, that more of our own eggs are being used in our local market and fewer foreign eggs, also that home consumption is increasing, due to improvement in quality and an increase in population.

The monthly bulletin of Agricultural Statistics gives the following statement, showing the production and value of farm eggs in Alberta.

	Egg producing hens	Eggs produced	Value
1924	4,242,284	26,514,275	\$5,037,712
1925	4,169,604	26,754,959	5,618,541

The estimated production per hen for 1925, is placed at 77 eggs, which is a slight increase over the figure used in the estimates for the previous year. The average wholesale price for 1925 is placed at 21 cents, which is an increase of 2 cents over the 1924 figure. These estimates do not include the eggs produced in urban territory.

The slight decrease in the number of egg producing hens in 1925 is evidence of some discouragement as a consequence of the low egg prices and high grain prices in 1924. This, however, is only a temporary set-back and will have little or no effect upon the rapid general growth the industry is making.

The growth of the industry is apparent in the following data showing the number and value of all poultry.

	Numbers	Value
1921—total poultry	4,963,565	\$4,251,500
1922—total poultry	5,422,130	3,981,200
1923—total poultry	6,630,163	4,189,300
1924—total poultry	7,214,819	4,488,040
1925—total poultry	7,122,139	4,836,844

THE EGG AND POULTRY MARKETING SERVICE.

The Edmonton, Calgary and Lethbridge branches of the Marketing Service handled in 1925, 516,883 dozen eggs and 828,766 pounds of poultry, a total of 93 carloads; an increase of 3 cars over the volume of the previous year and 17 cars less than the peak year 1923.

The following statement shows the volume of eggs and poultry handled each year since the inception of the Service in 1917:

	Eggs	Poultry	Total
1917	13,000 doz.	.....	1 car
1918	137,900 doz.	59,000 lbs.	14 cars
1919	77,000 doz.	75,000 lbs.	11 cars
1920	169,000 doz.	110,000 lbs.	19 cars
1921	178,000 doz.	245,000 lbs.	29 cars
1922	435,000 doz.	557,000 lbs.	69 cars
1923	660,822 doz.	925,000 lbs.	110 cars
1924	535,800 doz.	750,298 lbs.	90 cars
1925	516,883 doz.	828,766 lbs.	93 cars

The range of egg and poultry prices paid through the year 1925 is given in the following table:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Extras	26	28	23	24	22	24	27	32	31	30	37	55
Ones	23	25	20	21	19	20	23	28	27	25	32	50
Seconds	18	20	17	17	15	16	17	22	21	20	26	35

These prices f.o.b. Edmonton.

POULTRY.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Springs	11	12	12	..	..	..	22	20	14	14	113	12
Fowl	10	12	12	13	13	14	13	13	11	11	10	10
Turkeys	15	..	..	..	..	..	..	..	..	16	96	17
Ducks	09	..	..	..	..	..	..	..	..	10	0	09
Geese	09	..	..	..	..	..	..	..	..	10	09	08

Prices live weight f.o.b. Edmonton, No. 1 grade.

TURKEYS MARKETING.

The Calgary branch of the Service has continued the community killing and local pool shipping of turkeys. Cars were loaded at Nanton, Claresholm, Brooks, Scandia, Rainier, Patricia, Bassano and Duchess. A total of 63,764 pounds were marketed by the branch in this way.

The Pool shipping of turkeys was extended to the Grande Prairie district during the year, where farmers at Grand Prairie, Wembley, Halcourt, and Beaver Lodge co-operated. Two large car-loads were assembled, comprising 57,000 pounds. The farmers realized for these turkeys, after paying handling and marketing charges, 30 cents for number one birds over 12 pounds, 28 cents for birds 10-12 pounds, 26 cents for birds 8-10 pounds and 23 cents for birds 6-8 pounds. A total of \$15,000.00 was distributed to those who participated in these pool shipments. The turkeys were sold on the American market and were regarded as an unusually fine shipment, containing a large proportion of heavy, well-finished, number one birds.

The value of this crop to the individual is seen from the cheques received by two of the larger producers. Mrs. D. Ramsay of Rio Grande received \$335.00 for 132 turkeys, and S. Hanson of Valhala received \$310.00 for 108 turkeys.

The organization of the enterprise in the various centres was superintended by the Provincial District Agriculturist and the Dominion Poultry Representative. The grading and marketing was handled by the Edmonton branch of the Egg and Poultry Marketing Service.

As a result of the success of this enterprise, the people in the North have requested a continuance and an extension of this co-operative scheme.

MARKETING SERVICE RESULTS.

It has been the business of the Marketing Service not only to stimulate prices and offer an alternative outlet to producers, but to work out new and improved methods of marketing and to discover and cultivate new outlets for our surplus poultry products. The heavy movement of live poultry car-load lots to British Columbia is one singular accomplishment of the Service in the regard. Our heavy breeds of poultry are in excellent demand as table fowl and the Coast markets are each year absorbing an increased quantity of poultry for this purpose. Of the twenty-five car-loads of live poultry loaded at country points in 1925, the Edmonton branch alone shipped ten to the city of Vancouver.

The Marketing Service has been one of the principal wholesale concerns handling eggs and poultry in Alberta during the past few years. The volume handled in each of the past three years has been approximately 100 car-loads. It has been an important factor in the province acting in the interests of the producers, stimulating prices and improving marketing conditions in their behalf.

When the work was started in Alberta there was only one Province in the Dominion (P.E.I.) where any serious attempt was being made to recognize quality in eggs and pay the farmer on a basis of grade. The Marketing Service set out at that time to adopt this "quality payment" principle, and to enlarge and improve upon the Prince Edward Island plan. It was considered that the grading was the only effective means of improving quality and building up a permanent export business. The adoption of this system has involved a great amount of office detail and educational work, extending over several years and has cost the government a good deal, but the plan has been effective and the principal has since been incorporated by the Federal Government in its egg grading regulations.

Since the inception of the work of the Service, the poultry industry has grown to be a much more valuable asset to the province. In 1920, Alberta imported more eggs than she exported. Last year, 1925, there was an exportable surplus of over 50 car-loads. This surplus was all profitably disposed of, and in the future by virtue of improved quality and better methods of handling and marketing recently introduced, the industry will permit of a much greater expansion. The Poultry Branch through the Marketing Service has taken a leading part in bringing about this favorable development.

The marketing of poultry in the west has been an even more difficult problem than the marketing of eggs. Until recently the method followed in the west was to market as fresh killed poultry as much as the local markets would consume, and to kill, dress, box, pack and freeze the balance and market it as frozen poultry. What surplus we have had has gone principally to eastern Canadian markets. There is never a ready sale for frozen poultry when the fresh product is available, and consequently the disposition of the rapidly increasing surplus in the province was coming to be a serious problem. Upon studying the problem it was found that outlying producing sections in the United States were overcoming the difficulty by shipping their poultry live in car-load lots over long distances to Chicago, New York, Philadelphia and other large consuming centres. The Marketing Service undertook to introduce this method of marketing and was first to demonstrate its practicability.

Another benefit of this manner of marketing is the saving effected in the cost of transportation. It was costing the farmers two to five cents per pound to move their live poultry into Calgary and Edmonton by express. By adopting the method above described, a saving of approximately \$1.50 per cwt., resulted, which in the aggregate has meant a great saving to the industry and has effected beneficially the price paid to the producer.

The following is a summary of what has been accomplished by the Department through the Marketing Service:

1. Increased the prices paid to farmers on eggs and poultry.
2. Destroyed any independent control of markets and prices by dealers.
3. Inaugurated a system of paying the farmer according to the quality of his product.
4. Stimulated the growth of the poultry industry.
5. Organized local pool shipping of poultry products in many parts of the Province.
6. Introduced car lot shipping of live poultry to points outside of the Province.
7. Demonstrated the feasibility of marketing live poultry by freight in car lots from country points to Edmonton and Calgary.
8. Organized community killing and pool shipping in the marketing of turkeys in the larger turkey growing sections of the Province.

THE POOL.

In operating the Marketing Service the Department has had in mind to assist, as far as possible, in laying the foundation for the Egg and Poultry Pool, which in the month of November was actually launched.

An agreement was reached with the Pool officials by which the Marketing Service was to act as selling agency for the Pool. In view of the late beginning (November 9th) the volume of eggs and small poultry was small, the heavy marketing season for these products having passed. However, a large volume of pool turkeys was marketed, and when the business of the period was closed, a premium of 2 cents per pound above current market was paid to the contract signers.

THE PROVINCIAL POULTRY PLANT.

The work at Oliver is gradually being extended and breeding flocks of three of the more popular breeds are being built up. Never as yet has the farm been able to supply the quantity of stock wanted by farmers and poultry keepers in the province, but with the recent enlargement of the flocks and the installation of a Mammoth Incubator, many more orders are now being filled than was the case previously.

On December 31st, 1925, the plant carried 1,295 birds, of which 470 were Barred Rocks, 426 White Wyandottes and 399 White Leghorns. Of these, 1,177 were females, a large majority of which are to be used as breeders during 1926.

THE DISTRIBUTION OF DAY-OLD CHICKS.

In 1925, 21,876 day-old chicks were sold as follows: Barred Rocks, 7,628; White Wyandottes, 7,027; White Leghorns, 7,221. Over 400 farmers were served in this way. Owing to inability to fill all orders, the Department limited individual shipments to not more than 300 chicks. However, a great majority of the orders received have been for 25, 50 and 100 chicks, the purpose

of the average purchaser being to establish a breeding pen from the of chicks, which amount is considerably in excess of the amount improved flock. A total of \$5,002.57 was realized from the sale of chicks, which amount is considerably in excess of the amount received from this source in any previous year.

It is apparent from the experience gained in this work that greater service could be rendered and further stimulus given the industry by a further extension of the hatchery business, especially if it were taken up by private enterprise. One of the chief difficulties in Alberta, is to get good chicks early enough to mature before winter. Conditions on the farm in early spring are not such as to make it easy to raise early broods, and many farmers welcome the opportunity of buying their requirements.

In November of 1925, the Poultry Branch lost the services of Mr. J. Shackleton, who resigned owing to ill-health. Mr. Shackleton was manager of the Provincial Poultry Plant for ten years, and rendered invaluable service to Alberta farmers and poultrymen. His ability as a poultryman was outstanding, and the mark he left on the industry in Alberta is one deserving of most favorable comment.

Respectfully submitted,

J H. HARE,
Poultry Commissioner.

INCUBATOR RECORD, 1925—PROVINCIAL POULTRY PLANT

Showing advantage of using two-year-old hens rather than pullets as breeding stock. These results substantiate the findings of 1924.

Breed	Hatching period	No. eggs set	Infertile	Dead germs	Per cent. of eggs left in incubator after one week	Chicks hatched	Cripples	Per cent. left in incubator hatched not including cripples	Per cent. of all eggs set hatched
White Wyandotte hens	Mar. 10 to Apr. 26	1885	510	108	67.1	900	36	68.2	47.7
White Wyandotte pullets	Mar. 10 to Apr. 26	5970	1616	386	66.4	2690	139	63.8	45.0
Barred Rock hens	Mar. 10 to Apr. 26	1934	313	110	78.1	966	94	57.7	49.9
Barred Rock pullets	Mar. 10 to Apr. 26	7283	1171	664	74.8	3199	305	53.1	43.9
White Leghorn hens and pullets, White Wyandotte hens and pullets, Barred Rock hens and pullets.	Mar. 10 to June 3	55576	9566	2436	78.4	27531	2069	58.4	49.5

Report of the Superintendent of Fairs

H. A. CRAIG,

Deputy Minister of Agriculture.

Sir,—

I have the honour to present herewith the report of the superintendent of fairs for the year 1925.

From a financial standpoint I can not say that the past year has been an entirely successful one. During the month of July a drouth threatened the central part of the Province, which affected to a certain extent some of the early fairs and when the rains came in August, several of the larger fairs were more or less affected, principally Red Deer, Vermilion, Camrose, Vegreville and also some of the smaller ones. Last year dates were assigned for 83 fairs. Of this number 14 were cancelled; the majority, I believe, because their finances were not in a satisfactory condition and the prospects did not look favorable to any improvement. However, as the year advanced, conditions improved and there is quite an optimistic feeling prevailing amongst the societies at the present time, and they are looking ahead towards a better future.

The quality of exhibits was up to the standard and the entries were about the same as last year. A very noticeable feature, at some of the smaller fairs especially, was the keen interest taken by the people when judging was going on, and especially so when the judge took a class and gave a short demonstration. The interest was also very keen where boys' and girls' classes were put on.

The executive of the Alberta Agricultural Fairs Association again investigated the standing of certain societies that did not appear to be making much progress and as a result, five societies were written to notifying them that unless a big improvement was made in their fair their charter would be in danger of being cancelled; five fairs were to be inspected, and two charters cancelled.

One new society was organized and a charter issued, to be known as the Vilna Agricultural Society. The charters of the Daysland Agricultural Society and the Tofield Agricultural Society were cancelled.

The following poultry shows and horticultural exhibitions were held very successfully, mostly under the auspices of the agricultural societies:

Horticultural exhibitions: Calgary, Camrose, Lethbridge, Edmonton, Lloydminster, and Bellevue.

Poultry shows: Edmonton, Calgary, Lethbridge, Medicine Hat, Red Deer, Vermilion, Lloydminster, Sedgewick, Magrath, and Lake Saskatoon.

AGRICULTURAL FAIRS, 1925.

Circuit No. 1.

Claresholm	July	28-29
Langdon	July	29
Granum	July	30-31
Winnifred	July	30-31
Raymond	July	31-Aug. 1
Carmangay	Aug.	3-4
Magrath	Aug.	4-5
Medicine Hat	Aug.	3-5
Priddis and Millarville	Aug.	1
Nanton	Aug.	4-5
Macleod	Aug.	5-6
Lethbridge	Aug.	6-8
Okotoks	Aug.	10-11
Pincher Creek	Aug.	11-12
High River	Aug.	12-13
Cardston	Aug.	13-15
Taber	Aug.	13-15
Cochrane	Sept.	3-4
Brooks	Sept.	7-8
Lomond	Aug.	6

Circuit No. 2.

Oyen	July	23-24
Sibbald	July	28
Youngstown	July	30
Munson	Aug.	5
Chinook	Aug.	6
Hanna	Aug.	7
Bye-Moor	Aug.	11
Delia	Aug.	12

Circuit No. 3

Stony Plain	July	29
Lloydminster	Aug.	3-5
Vermilion	Aug.	6-8
Vegreville	Aug.	10-11
Innisfree	Aug.	12-13
Mannville	Aug.	14
Kitscoty	Aug.	15
Lamont	Aug.	20

Circuit No. 4

Olds	July	28-29
Big Valley	July	28-29
Stettler	July	30-31
Lacombe	Aug.	4-6
Wetaskiwin	Aug.	7-8
Camrose	Aug.	10-11
Red Deer	Aug.	13-15
Innisfail	Aug.	18-19
Bowden	Aug.	20

Circuit No. 5.

Morinville	Aug.	13
Onoway	Aug.	14
Rochester	Aug.	18
Colinton	Aug.	19
Thorhild	Aug.	25
Warspite	Aug.	26
Plamondon	Aug.	26-27
Westlock	Aug.	26
Busby	Aug.	28
Mossido	Aug.	26
Sangudo	Aug.	27
Greencourt	Aug.	28
Mid-Pembina	Sept.	10

Circuit No. 6.

Sedgewick	June	30-July 1
Crossfield	July	2-3
Benalto	July	21-22
Didsbury	Aug.	4-5
Goose Creek	Aug.	5
Strome-Killam	Aug.	7-8
Rimbey	Aug.	14
Leduc	Aug.	18-19
Ponoka	Aug.	20-21
Rocky Mountain House	Sept.	2-3
Milnerton	Sept.	16

Circuit No. 7.

Eastern Alta. (Provost)	July	21-22
Chauvin	Aug.	7
Irma	Aug.	11-12
Viking	Aug.	13-14
Edgerton	Sept.	16

Circuit No. 8.

Trochu	Aug.	6-7
Three Hills	Aug.	13
Hays (Lousana)	Aug.	19-20
Alix	Aug.	20-21

Circuit No. 9.

Berwyn	Aug.	4-5
Waterhole	Aug.	6-7
Lake Saskatoon	Aug.	11-12
Grande Prairie	Aug.	13-14
High Prairie	Aug.	17-18

Exhibitions.

Calgary	July	6-11
Edmonton	July	13-18

The following societies cancelled their fairs: Big Valley, Crossfield, Edgerton, High River, Irma, Macleod, Milnerton, Morinville, Raymond, Sibbald, Stony Plain, Three Hills, Westlock, and Winnifred.

Respectfully submitted,

S. G. CARLYLE,

Superintendent of Fairs.

Report of the Provincial Veterinarian

H. A. CRAIG,

Députy Minister of Agriculture.

SIR,—

I have the honour to submit herewith, the annual report of the provincial veterinarian's branch for the year 1925.

As in former years, the work of this branch during 1925 has been to deal with the health of the live stock at the various provincial government institutions, to render assistance to the farmers in the outlying districts in combating non-contagious diseases which they have difficulty in diagnosing and preventing and to act in an advisory capacity to the farmers, stockmen and those interested in live stock in respect to veterinary problems of particular interest to Albertans.

EDUCATIONAL WORK.

The veterinary instruction given at the Olds, Claresholm and Vermilion Schools of Agriculture has been handled by Drs. Sweetapple, Buchanan and Haworth, respectively. Particular emphasis has been placed upon unsoundnesses and minor ailments occurring in farm animals, the prevention of disease, and sanitation. The provincial veterinarian also makes periodical visits to the agricultural schools during the winter, in order to keep the students informed regarding the experimental work being carried on by his branch, and also to familiarize them with any new data with reference to his work.

At the College of Agriculture, University of Alberta, the aim has been to give material which will be of practical value to the students after graduation and the course deals particularly with problems and diseases peculiar to our province.

I would like to state here that it was only through the courtesy of the animal husbandry department and the staff of the university that it has been possible for us to carry on much of the experimental work which will be described later.

EXPERIMENTAL WORK.

During 1925 our experimental work has been confined principally to the following: contagious abortion, iodine deficiency and tuberculosis.

In reference to our experimental work with contagious abortion, I wish to take this opportunity to thank the following gentlemen for the valuable assistance given me at all times:

Mr. G. H. Hutton, Superintendent, C. P. R. Farm, Strathmore.
Mr. Geo. Jones, Manager, C. P. R. Farm, Strathmore.
Prof. J. P. Sackville, University of Alberta, Edmonton.
Mr. F. H. Reed, Superintendent, Dom. Experimental Farm, Lacombe.
Mr. L. T. Chapman, Dominion Experimental Farm, Lacombe.

It was their assistance and co-operation that enabled us to carry on these experiments, and, although I realize that it will take considerable time to get all the information desired, I feel satisfied that at least some headway has been made.

With the possible exception of tuberculosis, there is no disease which has proved more disastrous to the live stock industry than contagious abortion in cattle and there are probably few diseases attracting more notice at the present time. For a number of years we have been giving particular time and attention to experiments in eradication and control, using different methods with varying results. Our experiments with the Bowmen Abortion Remedy proved distinctly disappointing, while our experiments with the live bacillus abortus vaccine have been most encouraging. Our efforts have been along the lines of vaccination, endeavoring by the use of bacillus abortus vaccine, injected into non-pregnant animals, to produce immunity. I realize that many authorities have found this procedure unsatisfactory, but others claim to have received beneficial results following its use. As heretofore, we have used it only when other treatments have failed. We are now in a position to carry on this work more extensively, in the hope that its worth will be substantiated. Our reason for hoping we can control abortion by this means is that in the above method we are combating the trouble along scientific lines, and, although it is well known to all that immunization of cattle has long been the subject of experimental work, in my opinion, it is along scientific lines that the trouble will eventually be successfully fought.

The following gives a short history of some of the animals vaccinated with the bacillus abortus vaccine and the results obtained. It is our intention to follow these animals over a certain length of time to find out if immunity has been conferred for any definite period. In addition to the cases described below, we have eighteen cows recently aborted, which we have vaccinated with bacillus abortus vaccine and intend to follow in the same way.

- No. 1.—Purchased March, 1923. Gave birth to dead calf, July, 1923. Injected with Bacillus Abortus Vaccine, November 27, 1923. Failed to get in calf in 1924, but in 1925 carried calf to full time.
- No. 2.—Aborted, April, 1923. Vaccinated, June, 1923, with Bacillus Abortus Vaccine, and calved normally, April, 1924. Died March, 1925. Was in calf again at time of death.
- No. 3.—Aborted, April, 1923. Vaccinated, June, 1923, with Bacillus Abortus Vaccine. Calved April, 1924. Sold November, 1924, in calf, due to freshen in December.
- No. 4.—Aborted, April, 1923. Vaccinated with Bacillus Abortus Vaccine, June, 1923. Sold November, 1924, in calf, due to freshen in December.
- No. 5.—Aborted, March, 1923. Vaccinated, June, 1923, with Bacillus Abortus Vaccine. Calved normally, May, 1924, and again April, 1925, and in calf again.

- No. 6.*—Aborted March, 1923. Vaccinated with Bacillus Abortus Vaccine, June, 1923. Aborted September, 1924. Sold for beef June, 1925. Not in calf.
- No. 7.*—Aborted, April, 1923. Vaccinated with Bacillus Abortus Vaccine, June, 1923. Calved normally, July, 1924. Sold November, 1924. Not in calf.
- No. 8.*—Aborted, March, 1920, June, 1922, and March, 1923. Vaccinated June, 1923, with Bacillus Abortus Vaccine. Calved normally, April, 1924. Sold November, 1924, in calf again.
- No. 9.*—Aborted, May, 1923. Vaccinated with Bacillus Abortus Vaccine, June, 1923. Calved April, 1924. Calved, March, 1925. Safe in calf at present time.
- No. 10.*—Aborted, December, 1923. Vaccinated, January, 1924, with Bacillus Abortus Vaccine. Calved normally, July, 1925. Sold November, 1925, and was safely in calf again.
- No. 11.*—Aborted, January, 1924. Vaccinated, February, 1924, with Bacillus Abortus Vaccine. Did not breed during 1924. Calved, October, 1925.
- No. 12.*—Purchased January, 1924. Aborted, January 24, 1924. Vaccinated, February, 1924, with Bacillus Abortus Vaccine. Aborted, January, 1925. Sold for beef.
- No. 13.*—Purchased, 1922. Calved, April, 1922, with retention of the afterbirth. Aborted, May, 1923. Vaccinated, June, 1923, with Bacillus Abortus Vaccine. Calved, normally, July, 1924, and again, August, 1925.
- No. 14.*—Aborted, May, 1923. Vaccinated, September, 1923, with Bacillus Abortus Vaccine. Calved, normally, August, 1924.
- No. 15.*—Aborted, April, 1923. Vaccinated September, 1923, with Bacillus Abortus Vaccine. Calved, normally, August, 1924.
- No. 16.*—Aborted, March, 1923. Vaccinated September, 1923, with Bacillus Abortus Vaccine. Aborted, January, 1924, but calved normally, May, 1925.
- No. 17.*—Aborted, March, 1923. Vaccinated, September, 1923, with Bacillus Abortus Vaccine. Bred, November, 30th, 1923, and January, 1924. Calved, normally, October, 1924.
- No. 18.*—Aborted, August, 1923. Vaccinated, September, 1923, with Bacillus Abortus Vaccine. Bred November 25th and December 16th, 1923. Calved, normally, October, 1924.
- No. 19.*—Aborted, September 14th, 1922. Bred, regularly to September, 1923. Inoculated with Bacillus Abortus Vaccine, September, 1923. Bred regularly but did not get with calf until May, 1925.
- No. 20.*—Aborted, September, 1923. Vaccinated, October, 1923, with Bacillus Abortus Vaccine. Calved, normally, January, 1925. Bred again, March, 1925, and calved safely.

IODINE DEFICIENCY.

For several years this branch has been carrying on experiments to find out the best method of prevention and control of goitre in calves, weak lambs, weak colts and hairless pigs. All of these, it is claimed, may be due to a deficiency of iodine in the water and feed stuffs. We have found that the above conditions are more prevalent in certain districts and on certain farms than others.

After a careful survey of the various places available for investigational work along this line, the Claresholm Demonstration Farm was selected as the most suitable, principally because we have had more trouble with goitre on this farm than at any other government institution, and more reports have been received from

farms adjacent to the Rocky Mountains than from any other part of the Province. In addition, also, the animals on this farm were available for experimental purposes, and a fact which should not be overlooked is that we had at the Claresholm Demonstration Farm, Mr. Peter Cook, to take charge of the experiments. Mr. Cook is an ideal investigator, careful, methodical, always following the work down to the minutest detail and much of the credit of the experiments carried on at this farm are due to his untiring efforts.

With the idea in mind that all the animals on this particular demonstration farm were suffering more or less with iodine deficiency we decided to try an experiment of administering potassium iodide in solution to a pen of hogs which we were fattening for sale. The animals were weighed and divided into two separate lots, one used as a check upon the other. The results were so remarkable that we are duplicating the experiment and have now several groups of hogs being treated in a similar manner. The accompanying chart will show you the gains made, the feeds used and the amount of potassium iodide given.

As stated in my previous report, we have been trying out the various experiments to prevent goitre in young animals and have found that potassium iodide administered to pregnant animals, giving two grains per day during the period of gestation, will prevent the trouble. The drug is dissolved in water in the proportion of one ounce to the gallon of water and one tablespoonful of the solution given each day is approximately the right dose. The application of tincture of iodine upon the skin has also given excellent results. This has been found particularly successful in ewes. The dose is from fifteen to thirty drops, placed immediately on the skin every fifteen days. Care must be taken that the iodine is not poured on the same spot each time. The subcutaneous injection of tincture of iodine is efficient, but necessitates a hypodermic syringe and a considerable amount of technique which would not meet with favor among many stockmen.

I wish also to draw to your attention the fact that a number of farmers have been using a preparation containing a certain quantity of potassium iodide, which is put on the market by salt manufacturers and is meeting with considerable favor among many stockmen. It is very convenient to handle as there is no preparation necessary and it is ready to place in the feeding yards, where the animals may have access to it. I am of the opinion, however, that in some localities, iodized salt does not contain sufficient potassium iodide to meet the necessary requirements and may be of little value in the prevention of goitre. We intend to watch carefully as many as possible of the farms where this has been used, but I would not recommend it for general use until a careful survey has been made.

The following are short explanatory charts showing the methods employed in administering iodine, as conducted in our sheep and swine experiments:

SWINE EXPERIMENTS.

Claresholm Farm.

<i>Potassium Iodide Sol.</i>	<i>No Treatment.</i>	<i>Tincture of Iodine.</i>
1 Tam. Sow.	1 Berk. Sow	1 Berk. Sow.

Method of Application.

<i>Potassium Iodide Sol.</i>	<i>Tincture of Iodine.</i>
Given in a small amount of oat chop, 1 teaspoon per hog per day.	Dropped on back of hog, 30 drops per hog twice per month.

NOTES:

Potassium Iodide Sol.—Given in oat chop as the more reliable method of insuring that the hog receives same.

Tincture of Iodine.—Dropped on back of hog near shoulders and rubbed in. It is advisable that the part near shoulders be washed with soap and water before one starts applying as in most cases pigs have a dandruff or scale covering the back, particularly in the winter months. This will ensure better absorption of the iodine.

Duration of Treatment.—All of gestation period.

Results of Farrowing.

<i>Potassium Iodide Sol.</i>	<i>No Treatment.</i>	<i>Tincture of Iodine.</i>
(Tam. Sow.) 9 pigs in litter, all in best of health.	(Berk. Sow) 7 pigs in litter, all in best of health.	(Berk. Sow) 6 pigs in litter, all in best of health.

SHEEP EXPERIMENTS.

Claresholm Farm.

<i>Potassium Iodide Sol.</i>	<i>No Treatment.</i>	<i>Tincture of Iodine.</i>
5 ewes.	4 ewes.	5 ewes.

Method of Application.

Potassium Iodide Sol.—Given in small amount of oat chop.

Tincture of Iodine.—Dropped on back of ewe.

Amounts Applied.

Potassium Iodide Sol.—1 tablespoon for 5 ewes per day.

Tincture of Iodine.—Dropped on back of ewe. 30 drops per ewe twice per month.

NOTES:

Potassium Iodide Sol.—Given in oat chop, to ensure more uniform participation than when given in water as it is noticeable that some ewes do not partake of water as regularly as others.

Tincture of Iodine.—Dropped on back of ewes near shoulder, care being taken that the wool is parted and tincture applied to skin.

Duration of Treatment.—All gestation period.

Results of Lambing.

<i>Potassium Iodide Sol.</i>	<i>No Treatment.</i>	<i>Tincture of Iodine.</i>
4 ewes gave 6 lambs.	4 ewes gave 5 lambs.	5 ewes gave 6 lambs.

POTASSIUM IODIDE FEEDING EXPERIMENT.
Feeding and Grain Record for 65 days, 26th Sept. to 2nd Dec., 1925
(1 oz. to 1 Gal. water)

TABLE No. I.

No. and Breed of Pigs	Weights for 6 Pigs (Age.)		Weights for 1 Pig (Age.)		Feed Used		Daily Feed for 6 Pigs		Daily Feed for 1 Pig		Total Feed		Feed required for 100 lbs. Gain	Amount of Potassium Iodide Fed
	Initial	Final	Initial	Final	Kind	Proport.	Kind	Amt.	Kind	Amt.	Kind	Amt.		
6 Tam. & Berk.	438 lbs.	1000 lbs.	73 lbs.	167 lbs.	Barley Oats	2-3 1-3	Barley Oats	20 lbs. 10 lbs.	Barley Oats	31-3 12-3	Barley Oats	1300 650	349 lbs.	6 tablespoons fed night and morning in equal proportions 3 & 3.
						1		30 lbs.		5 lbs.		1950		

TABLE No. II.

Check.

No. and Breed of Pigs	Weights for 6 Pigs (Age.)		Weights for 1 Pig (Age.)		Feed Used		Daily Feed for 6 Pigs		Daily Feed for 1 Pig		Total Feed		Feed required for 100 lbs. Gain
	Initial	Final	Initial	Final	Kind	Proport.	Kind	Amt.	Kind	Amt.	Kind	Amt.	
6 York. & Berk.	552 lbs.	1065 lbs.	92 lbs.	177½ lbs.	Barley Oats	2-3 1-3	Barley Oats	20 lbs. 10 lbs.	Barley Oats	31-3 12-3	Barley Oats	1300 650	380 lbs.
						1		30 lbs.		5 lbs.		1950	

Table No. 1 fed grain and iodide
Table No. 2 fed grain only.

TUBERCULOSIS.

A considerable amount of experimental work in connection with this disease has been carried on at the different provincial government farms, and at other points, during the past year. This has all been with the co-operation and under the supervision of a committee which was formed in September, 1924, for the purpose of investigating tuberculosis in cattle. The committee is composed of seven members under the chairmanship of the deputy minister of health and includes the following:

Dr. W. C. Laidlaw, Deputy Minister of Health, Chairman.

Dr. Allan C. Rankin, Dean of Alberta Medical College and Provincial Bacteriologist, University of Alberta.

Dr. R. M. Shaw, Asst. Bacteriologist, University of Alberta.

Dr. T. L. McCullough, Asst. Superintendent, Provincial Mental Hospital, Ponoka, Alta.

Dr. A. H. Baker, Superintendent of the Central Alberta Sanitarium, Calgary, Alta.

Dr. J. J. Ower, Professor of Pathology, University of Alberta, Edmonton, Alta.

Dr. P. R. Talbot, Provincial Veterinarian, Edmonton.

The main effort of this body is to endeavor to try out, if possible, the various vaccines which will prevent the occurrence of obvine tuberculosis. Therefore, when the work of Dr. Calmette, assistant director of the Pasteur Institute, Paris, France, in conjunction with M. Guerin, director of the Pasteur Institute at Lille, was brought to its attention, the great possibilities in the culture attenuated by these men, apparent from the results of their experiments, were at once recognized. The fact that they had been able to modify a virulent bovine bacilli to such an extent that the organism was non-pathogenic to even very susceptible animals and quite without power to produce typical lesions, yet capable of producing immunity to a remarkable degree, led us to make the attempt to try out this vaccine in this Province, as an immunising agent against both natural and artificial infection in cattle.

There was considerable delay before Dr. Rankin, provincial bacteriologist, University of Alberta, could get started with the Calmette vaccine. Difficulty was experienced with the culture on account of the long distance it had to come and consequent delay in transit. After it was ready for inoculation purposes, charts were prepared, which when completed would show the weight, temperature, etc., for a period of 30 days, and certain animals were placed under careful observation and the developments carefully kept and tabulated. The results are being brought to a conclusion as rapidly as possible, but it will be some time before a complete summary can be made of the first inoculations. The combative measure of immunising calves against tuberculosis is causing world wide attention and it is giving the scientific men, as well as cattle breeders throughout the entire Dominion, much satisfaction to know that the efforts of the Research Council of Canada have the universities of the standing of Toronto, McGill, and Alberta, uniting to try out the Calmette vaccine. It is also pleasing to know that a bacteriologist from the Pasteur Institute,

Paris, France, a man trained under Dr. Calmette himself, will be placed at the McGill University shortly, in order to carry out the work in Canada as instigated by the discoverer.

It will also be of interest to you to know that we have under observation, a number of calves vaccinated with the Raw vaccine. This immunising agent has received considerable publicity during the past two years. Through the London office of the high commissioner for Canada, we purchased from the discoverer, Dr. Nathan Raw, late M.P. for Liverpool, and formerly visiting physician to the Heswell Consumptive Sanitarium, a supply of the vaccine and are carrying on experiments along similar lines as those with the Calmette preparation, although not on such an elaborate scale. It is interesting to know that British journal and newspaper articles are stating that considerable numbers of cattle have been vaccinated in that country by the Raw method, and it is being claimed that on certain farms, where, before the use of the vaccine 50% of the calves suffered with tuberculosis, not a single one showed any signs of the disease after vaccination. We are not as yet in a position to state definitely the efficiency of either of these vaccines, until our experiments have been completed we are reserving judgment, but, in all fairness to the discoverers, it must be admitted that as far as our experiments have been carried, the vaccines have done everything which was claimed for them. Should they prove successful—and we sincerely hope that they will—we could, by the universal use of vaccine, immunize all newly born calves, which would make it possible to stamp out this scourge within a reasonable time. If vaccination is successful, another great advantage for a system such as this would be that it is a comparatively inexpensive process, as the only cost attached to it would be the time taken to vaccinate the calves and the small cost of a dose of vaccine per calf.

THE STALLION ENROLMENT ACT.

As will be noted by the following table, the figures of the stallions enrolled in 1925 show quite a substantial increase over the number enrolled in 1924.

The Thoroughbred Horse Breeders' Association deserve a great deal of credit for the interest they have taken in the light horse business. During 1925 they were instrumental in importing into the Province, six pure bred thoroughbred stallions, five of which were from Great Britain. These were all personally inspected by myself and several of them were found to be stallions of exceptional quality and breeding. We understand that the activities of this association are to be considerably increased during 1926, and it is felt that an increased interest is being taken in the pure bred horse industry and that a feeling of optimism which has been lacking for a number of years is existing all over the Province.

	1924		1925	
	Enrolled	Inspected.	Enrolled.	Inspected.
Percheron	226	..	247	2
Clydesdale	175	1	181	..
Belgian	77	1	77	2
Shire	11	..	11	..
Standard bred	4	..	7	..
Suffolk	4	..	6	..
Thoroughbred	9	..	17	6
French Draft	2	..	4	..
American Saddle	1	..	1	..
Jack .....	..	..	1	..
	509	2	552	10

Respectfully submitted,

P. R. TALBOT,

Provincial Veterinarian.

Report of the Director of Provincial Farms

H. A. GRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit herewith the annual report of the provincial demonstration farms for 1925.

The crop for 1925, on the provincial farms, was a fair average crop, with the exception of the Gleichen farm; where hail destroyed the entire crop. With extra moisture, however, we were able to harvest a light crop of green feed.

The early spring conditions were very favorable; the land in most cases had to be plowed in the spring, with the exception of summer-fallow or intertilled land, owing to the very dry conditions the previous fall, but with plenty of moisture to germinate the grain and with occasional light showers during the growing season, the grain made very rapid growth. Although not as heavy a yield as 1924, the yield in most cases was very satisfactory.

The Olds farm produced a very heavy yield of oats and barley. On one field in particular of first germination, Banner Oats gave us a yield of 114 bushels per acre of the entire field, which would go to show that the selection of good seed grain is of essential value for higher production.

The Claresholm farm also had a very good crop, although not as heavy a yield as some previous years, but with bright, sunny weather in the early part of the harvest, the grain matured very early, and we were very fortunate to have the crop harvested and threshed before the bad weather started in the latter part of the harvest. We had a very fine sample of Marquis wheat, which we are disposing of to the farmers in the district for seed.

In the Raymond district, the weather conditions were very dry during the months of June and July, and with the large acreage of alfalfa to be irrigated, it was impossible to irrigate the grain crop at the time it would have been beneficial—that is why the grain crop was not as heavy as usual, although a good average yield.

The Vermilion farm produced only a fair average crop for that district, owing to the lack of moisture in the early part of the summer.

Youngstown farm had a very good yield for that district. Wheat gave us a yield of 35 bushels; oats, 60 bushels, and barley, 40 bushels per acre, with a very good crop of Brome grass hay.

ALFALFA.

Alfalfa has been grown on three of our farms for several years; two of these are under the irrigation system and one dry farming. During the coming season we hope to seed four or five acres on each of the other farms, these also will be under dry farming conditions. I am sure it is possible to grow alfalfa in any district in Alberta, if the land is possibly seeded with sweet clover first, using a culture to inoculate the soil, and which can be followed with alfalfa. This clover, while not as good a pasture crop as sweet clover as there is more danger of bloat when the clover is wet in the early morning or after a rain, for horses, cattle or sheep, I find it of great value as a pasture for pigs. This clover makes one of the best roughage for dairy cattle and sheep that can be obtained on the farm.

SWEET CLOVER.

This clover will be of great value as a pasture crop, as it can be grown successfully in mostly any district. It also makes a very good crop for silage purposes, as we have used this for silage for three years on the Claresholm farm, and find it to make a very palatable silage, and compares very favorably with corn or sunflower. It may not be possible to obtain as heavy a tonnage, but this crop can be harvested at the time of year before the harvest begins. We have also found it to be of great value as a roughage for steer feeding, and for other stock. The first crop can be used for silage purposes, as it is often very green and more difficult to cure. The second crop will make a better quality of hay, and can be cut with the binder and put in small stooks to dry, and by doing this, we were able to conserve the leaves that are otherwise lost. If cut with the mower, and left to dry on the ground. This makes a very valuable crop to add to your rotation, as it helps to stop soil drifting and adds fibre and increases fertility in the soil.

CORN.

Corn has been grown successfully on all of our farms in the southern districts for several years, with good results, and with a number of varieties can be brought to maturity for seed. Land that is to be used for corn, must have deep cultivation to grow the best results, and has to be properly prepared to destroy all weeds and make a fine seed bed. Corn must not be planted too early, before the land is warm, as there must be quick germination or the seed will be destroyed. It is possible to grow corn in mostly any district in Alberta, as we had good success with corn in the Athabasca district, when this farm was operated.

SUNFLOWER.

This crop is of material value in some districts, where the lack of moisture prevails and where a heavy tonnage is required for silage purposes, as sunflower will yield a heavier tonnage per acre than any other silage crop. It is more difficult to harvest and is not

of as much value as corn used for fodder only, but we have found that the silage compares very favorably with corn for dairy cattle or for steer feeding.

SUGAR BEETS.

This is the first year we have grown this crop on the Raymond farm, and had an acreage of 18 acres, which produced from 16 to 18 tons per acre, but with the excess moisture in the early fall and the severe weather coming so early made it very difficult to harvest the crop, and made the price of harvesting nearly double what it would have been under normal conditions. This crop, included in the rotation, will be very valuable to help eradicate the weed, and this is very badly needed in that district.

LIVESTOCK.

All of the flocks and herds made satisfactory increase during the year, with very little sickness or contagious disease. We have on three of our farms, where the schools of agriculture are in operation, extra breeds of cattle, which is necessary for class room purposes. At the Claresholm farm we have Herefords, Aberdeen Angus and Ayrshires. The Ayrshire herd was an addition this year, and some of them are making very creditable showing on the R.O.P. test. At the Olds farm we have pure bred Shorthorns, grades, Guernseys and a few pure bred Holsteins to represent the dairy breeds. At Vermilion farm we have dual purpose Shorthorns, with grade Ayrshires and Holsteins. A large number of the dual purpose Shorthorns are on R.O.P. test, and a number of them have qualified with good results, which are as follows:

	Milk.	B.F.
Rose of Crookdake	9775.4	4.3
Royal Princess	6610.6	4.1
Dora Director	5691.3	4.2
Miss Glencoe Director	7092.4	4.2
Cherry Blossom	7158.5	4.3

In the above list two of these are heifers in their first lactation period. The amount to qualify in 365 days is 5,000 lbs. of milk and 175 lbs. of butter-fat in the two-year-old class.

STEER FEEDING.

We are not carrying on experiments with steer feeding this year, owing to the scarcity of feed for that purpose, and with the addition of dairy cattle to several of our farms, I found it impossible to do so.

We have 135 lambs on experiment at the Raymond farm, with the beet pulp and syrup by-products from the sugar factory. We have four lots divided as nearly uniform as possible, with the following feeds in each experiment:

Pen No. 1—Alfalfa hay and beet pulp.

Pen No. 2—Alfalfa hay and oats.

Pen No. 3—Alfalfa hay, beet pulp and syrup.

Pen No. 4—Oat straw, beet pulp and syrup.

This experiment will be carried for 90 days to determine the feeding value of pulp and syrup vs. oats, as to the cost of producing the grain.

At the conclusion of the 90-day test an experienced lamb buyer was asked to value each group of lambs in the feed lot. The values given were, lots 1, 2 and 3, \$10.50 per hundred pounds. Lot No. 4, \$10.00 per hundred pounds. These quotations are used as a basis for determining the cash returns from each lot.

In order to determine the approximate dressing percentage of the lambs fed each ration, four representative lambs from each group were slaughtered and the dressing percentage and finish of each lot noted.

The following table and chart give in detail the results of the experiment.

FEEDING EXPERIMENT WITH RANGE LAMBS.

Rations	Alfalfa Hay Beet Pulp	Alfalfa Hay Molasses Beet Pulp	Alfalfa Hay Whole Oats	Oat Straw Molasses Beet Pulp
Lot number	1.	2.	3.	4.
Number lambs per lot	33.	54.	35.	32.
Number days fed	90.	90.	90.	90.
Average initial weight per lamb.	73.9 lbs.	73.9 lbs.	75.4 lbs.	73.2 lbs.
Average final weight per lamb..	91.2	93.0	98.5	84.3
Gain per lamb	17.3	19.1	23.1	11.1
Gain per lamb daily .....	.192	.212	.256	.123

QUANTITY OF FEED PER LAMB:

Wet Beet Pulp 90 days.....	647.0	647.0	647.0	647.0
Wet Beet Pulp per lamb daily..	7.18	7.18	7.18	7.18
Roughage fed per lamb	166.6	155.8	228.5	180.0
Roughage fed per lamb daily...	1.85	1.73	2.53	2.0
Molasses fed per lamb .....	....	17.3	....	17.3
Molasses fed per lamb daily....	....	.192	....	.192
Grain fed per lamb .....	....	....	83.1	....
Grain fed per lamb daily .....	....	....	.92	....
Salt fed per lamb	2.0	1.5	1.5	1.0

COST OF FEED PER LAMB:

Beet pulp, at 60c per ton	0.19	0.19	....	0.19
Roughage: Alfalfa hay at \$10.00 .....	....	....	....	....
Straw, at \$3.00 per ton .....	.83	.77	1.14	.27
Molasses, at \$18.00 per ton .....	....	.15	....	.15
Grain, at 1c per lb. ....	....	....	.83	....
Salt, at \$2.00 per cwt. ....	.04	.03	.03	.02
Total cost of feed	\$1.06	\$1.14	\$2.00	.63

COST OF FEED PER 100 LBS. GAIN:

Beet Pulp	1.09	0.99	....	1.71
Roughage.....	4.79	4.03	4.93	2.43
Molasses .....	....	.78	....	1.35
Grain .....	....	....	3.59	....
Total	5.88	5.80	8.52	5.49

FEED FOR 100 LBS. GAIN:

Beet pulp	3740 lbs.	3387 lbs.	.... lbs.	5828 lbs
Roughage.....	960	810	989	1620
Molasses .....	....	90	....	155
Grain .....	....	....	360	....

CASH RETURN PER LAMB:

Cost of lamb and feed	\$ 9.01	\$ 9.09	\$ 9.95	\$ 8.58
Selling price per cwt.	10.50	10.50	10.50	10.00
Selling price per lamb	9.57	9.76	10.34	8.43
Profit per lamb .....	.56	.67	.39	.15
Dressing percentage	47.0	48.60	46.80	46.5

As this report is based upon the results of one year's work, the conclusion or deduction obtained therefrom cannot be considered as final until verified by subsequent tests. The experimental results point more to the practices that should be avoided rather than those which should be followed.

Respectfully submitted,

D. DOUGLAS,

Farm Director.

Report of the Director of Women's Home Bureau Service

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit herewith the report of the women's home bureau service branch for the year 1925.

Women's home bureau service work for this year has almost entirely consisted of short courses of three or five days. Very few single day lectures were applied for.

During 1925 lectures, demonstration-lectures and short courses were given to the United Farm Women of Alberta, the Women's Institute, Women's Institute Girls' Clubs and a few community clubs. In some districts there has been good co-operation between different women's organizations in arranging for demonstrations. The subjects dealt with were:

Foods and their Function in our Daily Growth, and the maintenance of Health and Strength.

Cooking, Care and Preparation of Foods.

Household Administration in Its Various Branches.

Sewing.

Millinery.

Basketry.

Child Welfare.

Home Nursing and Treatment in Emergency.

DEMONSTRATION AND LECTURE WORK.

The arrangements made for carrying on this work are as follows: the Department of Agriculture provides the lecturer or demonstrator, paying her travelling expenses and sustenance allowance. The local organizations undertake to advertise the lecture, demonstration-lecture, or short course. They provide the place of meeting and some of the equipment, where equipment is required.

Home bureau service work was carried on during every month of the year, the greater part being done during the summer months.

No. of Foods, Cookery and Household Administration Short Courses	6
No. of Demonstration-lectures Given	7
Total Attendance at Meetings	407
Average Attendance	16

No. of Sewing Short Courses Given	75
No. of Demonstration-lectures Given	5
Total Attendance at Meetings	5,282
Average Attendance	13
No. of Millinery Short Courses Given	48
No. of Demonstration-lectures Given	2
Total Attendance at Meetings	4,910
Average Attendance	13
No. of Basketry Short Courses Given	19
No. of Demonstration-lectures Given	3
Total Attendance at Meetings	4,788
Average Attendance	40
Total Attendance at All Short Courses	15,387
No. of Single Demonstration-lectures	17
Total Attendance at Demonstration-lectures.....	206
No. of Lectures Given	7
Total Attendance at Lectures.....	196
Total Attendance at Short Courses, Lectures and Demonstra- tions	15,789
No. of places Visited	194
No. of Constituency Conferences Held.....	38
Total Attendance at Constituency Conferences	2,436
No. of District Conferences Held	1

Dressmaking and sewing courses have been held for three or five days. This type of work is so much a part of the daily life of our women that there will always be a fair demand for help of this kind.

Millinery courses have been carried on for three and five days. This branch of our work is a very popular one and has been and is valuable in many ways as well as in the making of hats. Cleaning, dying and tinting of materials and flowers have been successfully given during these courses. The processes used in the handling of different types of goods have been shown to the classes and the methods of testing textiles to find out what materials are made from, has been dealt with.

Basketry courses have been carried on for three or five days. Very little can be accomplished in this subject in one day and we do not recommend organizations to take the work for less than three days unless they have had a course before and wish to do follow-up work. It is hoped that as a result of the work now being done in the basketry courses, our women will develop the work along lines which will enable them to go into the making of small articles of household furniture for their own use. Many of our people have come from countries where arts and crafts are a well organized and paying industry and through time we should discover those skilled in this way, and using the law of demand and supply as a basis, bring people wanting such goods into contact with those who have the training to carry out the specialized work here, rather than having them send to the old lands. It is an important factor in our development as a Province that we get to know the possibilities that are within our own territory.

Just what this adult educational work is to our people it is not possible to state in figures, nor in black and white. The branch sends out the best demonstrators it can procure, but that is only something like 50% of successful preparation for the work. The local organizations must carry out their part of the agreement to make the work helpful and a success in their district. Organizations are realizing this fact more and more and the demonstrators are finding that excellent plans have been made in many cases before their arrival.

Some women's institute constituencies have arranged to take on one subject or at most two subjects for the coming year's work. This plan was suggested about two years ago. Certain advantages are to be gained by such a system. This was seen at the Hand Hills constituency conference this year. They had several exhibits, but the one which is of special interest to us was a millinery exhibit. Prizes were offered and the exhibit was divided into two classes—dress hats and sport hats. These were made during demonstrations or in follow-up work. Millinery was the subject which had been chosen for the work of the constituency during 1925.

It is interesting to note that the constituency conferences of the women's institute are this year reported to be the best held for some time.

LOAN COLLECTION, CLIPPING BUREAU AND TRAVELLING LIBRARIES.

This branch of our work has gone on quietly doing the work for which it was established. It has developed in the most healthy way and is being more used each year by those who know its value. Many people do not know about this part of our work and, therefore, do not ask for the help which is ready for them to use. Miss Murphy, the librarian of this branch, is willing and ready to give information and assistance to those applying for it.

Community work of a social kind is rapidly materializing. Community singing, sport clubs and dramatic societies are sharing with dancing, increasing popularity. To help to meet these demands we have a large selection of plays which are loaned out, also books of information on entertainments and books of words of songs, for free distribution.

The travelling libraries are doing a very necessary piece of work in rural and isolated districts. They contain books of good fiction, travel and biography. Information on technical and more solid subjects can be got from "books from the shelf," or from other libraries which deal more fully with such subjects.

During the year 1925 there were 3,110 reference folders sent out and 72 travelling libraries.

The Women's Institute members and others collected material for "An Alberta Pantry" to be put on at the Canadian National Exhibition at Toronto. The Exhibition Board offered free space in the women's building to the Women's Institutes throughout the Dominion. The Canadian National Railway gave facilities for free

transportation for the exhibit. The department provided a place in which to collect the material; packed the exhibit and paid the expenses of the Women's Institute representative who went to Toronto.

Many of the manufacturers in the Province contributed suitable samples of their goods and that brought home to many of us our ignorance with regard to what is going on around us, and how quietly but surely industrial undertakings are growing in our midst.

The idea of the exhibit came from the Women's Institutes and the members contributed the canned cultivated fruits, vegetables, pickles, etc. Good samples of wild fruits, game, fish and meats were given and altogether a very fine pantry was got together. We are indebted to the Women's Institutes for putting on this work. The Province has benefitted as a result of the publicity secured at Toronto.

The Alberta Women's Institute Girls' Clubs have not increased in numbers, but they are working very actively. They have done a good year's work during 1925 and they had an excellent convention at Banff in the month of July. Hon. George Hoadley, Minister of Agriculture, sent a letter to the provincial president shortly after the convention was held and as this letter gives a comprehensive resume of the work done, I will give it here.

"It was with feelings of very great regret that I cancelled my visit to your convention at Banff. As I told you in my telegram, matters of the utmost importance to the Province prevented my getting any further on my way to you than the city of Calgary.

"My interest in your work is, however, in no way diminished, and I wish you to know that I think your Camp Conventions held in our beautiful mountain districts are an important piece of educational work.

"Miss Noble, your provincial supervisor, was inspired with enthusiasm and a broad outlook when she conceived the plan you are now working on.

"In taking girls to such places as Banff and Jasper and surrounding them with an environment which such places give us in such an abundant manner, you give many of the girls an entirely new outlook on life. In both places you have landscape containing mountains, glaciers, valleys, forests, lakes and rivers. They both have those features and yet the two districts are entirely different. They both give unrivalled opportunity for the enlargement of our mental vision, and for the development of our sense of values. Talks have been given on the formation and history of the districts and in this way, you have not only been able to look at the country, but have also been given the opportunity to gain valuable information.

"Your club work has not been lost sight of, as you devoted your mornings to this work. I was interested to hear that in your address to the girls you emphasised the importance of 'the group spirit,' the place of 'determination and ambition' in life, and the value of 'willingness to learn' and 'to learn for the sake of knowing.' I have seen a copy of your programs and it brings out what I said to start with—'the educational value of such meetings.'

"I am sorry that I only sent three pictures instead of four, for prizes in your competitions. I am now forwarding the fourth one to the secretary of the Girls' Club at Eagle Hill. You seem to have made a very good beginning with this part of your work.

"I cannot close my letter without referring to the historical pageant which you saw in Calgary. There, you had presented to you in a very vivid manner many of the important incidents in the history of the north-west. There passed before you in one hundred minutes the main events of our history in the last fifty years. The Hudson's Bay Company's float carried you back to 1670 when their charter was signed. Altogether, by much forethought and energetic organization, you gave the girls an education in a few days that some people never get, and that would take years to acquire from books.

"I understand you have two resolutions which you are forwarding to me. I shall be very pleased to give these my sympathetic and earnest consideration when they are placed before me.

"Wishing you continued success in your splendid work, I am,
Yours very truly, (Sgd.) Geo. Hoadley."

This year the clubs hold their convention at Jasper. Their plans for this meeting are well advanced.

ADVISORY COMMITTEE ON WOMEN'S IMMIGRATION.

This committee is still functioning, though not very actively. The various organizations throughout the Province took up the work of welcoming the newcomers so heartily that all the committee is doing at present is merely holding a watching brief. The women of the United Farm Women of Alberta, the Women's Institute, the Local Council of Women, as well as members of other organizations are co-operating with boards of trade and representatives of the Land Settlement Branch (Dominion Department of Immigration.) In this way there is little or no overlapping. The effort which has been put forth in an endeavor to give newcomers a fair start and a kindly welcome will give an ample return in the districts which are being benefitted by new settlers coming in.

The names and addresses of the conveners of the welcoming committees are kept on file at this office. Information will be asked for on the work done and a return will be issued later.

The United Farm Women of Alberta have been particularly active in connection with co-operative marketing pools. This branch assisted in making the work known by mailing out material containing information about these schemes. The provincial secretary of the Women's Institute gave us permission on behalf of the advisory board to use the Women's Institute mailing list.

In conclusion, I have much pleasure in acknowledging with thanks, the efficient services rendered by those associated with me in the work of this branch.

Respectfully submitted,

JESSIE C. MACMILLAN,
Director.

Report of the Publicity Commissioner

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to present herewith the report of the publicity branch for the year 1925.

GENERAL PUBLICITY WORK.

The general publicity work of the branch in connection with the Province as a whole, was carried forward during 1925, as in previous years, there being a marked increase in the demand on the branch for information of all kinds. The increased interest in the Province shown by prospective settlers was evidenced by the many hundreds of letters of enquiry we received and answered during the year.

Continued demand for publicity material and others information for newspapers and periodicals was experienced during the year, and we were able to supply a great many periodicals and special writers with such information.

During the year several important parties of visitors came to the Province, including the members of the American Association of Agricultural Editors to the number of more than 100. This branch gave active support to the arrangements for entertaining these visitors, and bore a portion of the expenses of their entertainment in Edmonton. The visit of this party alone brought to many thousands of readers in the United States valuable information concerning our Province in the form of articles written by the members of the party themselves. We also had visits from the members of the Graphic Arts Guild, and from a party of British journalists the latter being one of the most important from the standpoint of active representatives of the British press that we have ever had in Alberta. The publicity commissioner was an active member of the committee in charge of the entertainment of these visiting parties, thus forming valuable connections for the dissemination of information concerning the Province.

The weekly news letter containing live news items regarding development in the Province, which has been a feature of publicity work since 1922, was continued, with increased circulation among periodicals at home and abroad. I am glad to report that a very extensive use was made by these periodicals of this news letter.

Early in the year a statistical handbook was prepared by this branch, setting forth by means of charts and statistics the progress of the Province in various branches of development for the past twenty years. This handbook was published under the title "Charts of Progress" and has been in great demand since its publication. It proved to be of considerable value particularly to financial houses in United States and Canada interested in investments in provincial bonds, and in other forms of investment here.

A new edition of the Alberta illustrated handbook was also published, and further distribution of this made at Wembley exhibition, and through the usual channels, regular supplies of this and other literature being furnished the Canadian offices at various points in the United States and Great Britain.

A third issue of the pocket map of the Province, in colors, specially prepared for his branch, was made in 1925, and distributed to enquirers abroad. This map, which contains a fund of information concerning the geographical and physical features of the Province, has been one of the most popular publications we have issued. Another edition is being prepared for 1926, with all corrections made up-to-date.

The total number of Alberta handbooks distributed was as follows: Alberta handbook, 56,000; Alberta book, 6,000; charts of Progress, 8,000; and Maps, 7,000. More than 4,000 letters of enquiry were answered during the year.

The distribution of photographs has again proved a popular means of publicity, and there has been a great demand for these.

AGRICULTURAL PUBLICATIONS.

Owing to policies of economy, the publication and distribution of agricultural publications has been curtailed for the past two years, the only publications issued in that time having to do with the grasshopper plague, with the problems of cultivation and suitable crops for Southern Alberta, and in connection with irrigation. There is increasing demand for all classes of agricultural publications, and it would appear advisable to increase the supply of these. Material is now in hand for a new bulletin on poultry which will be of great value to the farmers.

MOTION PICTURE BUREAU.

Owing to the necessity for economy, the work of the motion picture bureau operated under direction of this branch, was somewhat limited in 1925, but important features of the work were maintained, particularly the distribution of educational films for short course work, and among the schools of agriculture and district agriculturists, who make extensive use of the films we have in stock. There has been a considerable demand for our motion pictures on the Province in general, and it seems advisable that some plan should be devised for showing these pictures to the people of the Province, particularly to the school children.

Towards the end of the year we were able to secure some splendid motion picture footage on the operation of the new sugar beet factory at Raymond, and this picture will be ready for circulation shortly.

AGRICULTURAL EXHIBITS.

Although no provincial exhibits were carried abroad this year, many fine specimens of grains and grasses were collected throughout the province for exhibit purposes by Mr. Frank Peterson. A fine provincial exhibit was carried at the provincial seed fair. By arrangement with the Dominion government, it is planned to place a permanent exhibit in the Banff museum, where other provincial exhibits are also maintained. This should be of great interest to the thousands of tourists who pass through there each year.

CROP REPORT AND STATISTICS.

The issuance of regular crop reports during the crop season was continued last year.

With respect to crop statistics, the new crop district map arranged last year with the Dominion government, is being used for the first time with respect to 1925 crops. This map shows districts made up of groupings of census divisions in place of provincial ridings. The advantage of this is that the census divisions are based on boundaries of municipal units, which are permanent boundaries. We have therefore a permanent basis now established for the compilation of statistics, in preparation for the time when it will be possible to use the municipal unit as the unit for the collection and compilation of all crop statistics.

THE CROP SEASON.

The crop season of 1925 was generally satisfactory throughout, viewing from the standpoint of the main results. The total marketable value of all agricultural production has been estimated at \$254,000,000, one of the highest levels ever reached by the Province. The wheat crop was estimated at 103,000,000 bushels, being an average yield of 18 bushels over a total seeded acreage of 5,719,000 acres. This is the second largest wheat crop ever produced by the Province. Unfavorable harvesting conditions, however, tended to lower the grades considerably, with the result that a great deal of low grade wheat and other grains were harvested. Prices, however, remained uniformly high, with the result that the returns were generally satisfactory.

The seeding and growing season was characterized by variable weather conditions. Plowing was commenced almost two weeks earlier than the previous year. Seeding operations commenced in Southern Alberta about April 20, but were delayed by heavy precipitation and other unfavorable conditions. This applied also to Central and Northern Alberta, where seeding did not

become general until the second week in May. The splendid moisture conditions, however, gave the new crop a satisfactory start, and growth was very rapid. General pasture conditions were better than for some years, owing to the great abundance of moisture from the heavy snows of the previous winter.

In the early part of July a period of very warm, dry weather set in, and this had the result of reducing yields in some of the southern and east central districts. Cutworms and other pests were also active in certain southern districts, and also in the Grande Prairie and Peace River districts, but the well-organized campaign of the department kept this situation well in hand. Though the loss in a few limited areas from pests was heavy, the general percentage of loss was very small.

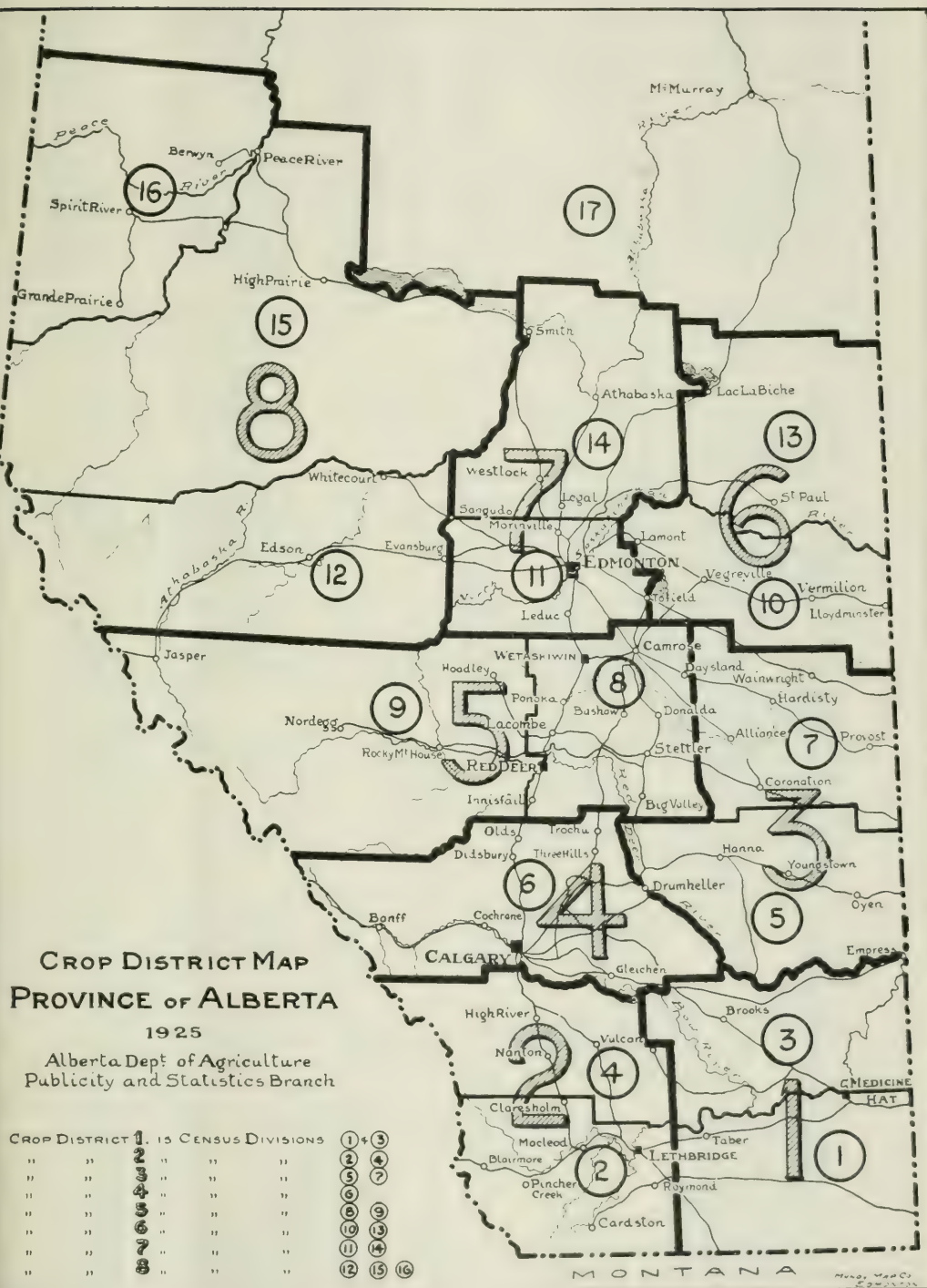
Harvesting of the new crop was fairly well commenced when unfavorable weather set in and delayed operations, chiefly in the southern part of the Province. This condition, which included some very cold, wintry weather, and heavy snows, had the effect of lowering the grade of the grain in the stook, but gradually the weather cleared, and harvesting was completed very late in the year.

Various statistical tables dealing with general production and livestock are attached herewith.

Respectfully submitted,

COLIN G. GROFF,

Publicity Commissioner.



COMPARATIVE STATEMENT OF AGRICULTURAL PRODUCTION 1924-1925

GRAIN CROPS	ACREAGE		YIELD PER ACRE BUSHELS		TOTAL YIELD BUSHELS		PRICE		VALUE	
	1925	1924	1925	1924	1925	1924	1925	1924	1925	1924
			Bush.	Bush.	Bush.	Bush.	\$1.12	\$1.20	\$115,310,139.84	\$73,574,331.60
Spring Wheat	5,687,449		18 00		102,374,082				26,009,620 00	22,725,873.60
Winter Wheat	32,300				581,400				5,941,815.25	7,420,770 00
All Wheat	5,719,749				102,955,482				1,040,478.40	2,606,534.00
Oats	2,397,200		31 00	30 00	74,313,200	61,311,943	.35	.41	61,250 00	139,250 00
Barley	552,727		25 00	25 00	13,818,175	12,367,950	.43	.60	131,477.50	181,507.50
Rye	133,398		12 00	10 00	1,600,736	2,743,720	.65	.95	37,867.50	39,816.00
Flax	5,000		7 00	5 00	35,000	75,000	1.75	1.85	8,964.00	11,064.00
Mixed Grains	15,026		25 00	30 00	375,650	403,350	.35	.45	\$148,541,612.49	\$106,699,146.70
Peas	1,683		15 00	12 00	25,245	19,908	1.50	2.00		
Beans	332		12 00	12 00	3,984	5,532	2.25	2.00		
Total Field Crops	8,825,115				193,127,472	132,356,363				
ROOTS, ETC.										
Potatoes	32,359		Cwt.	Cwt.	Cwt.	Cwt.	1.00	.95	\$ 3,235,900.00	\$ 2,797,161.00
			100 00	93 00	3,235,900	2,944,380				
Sugar Beets	6,000		Tons	Tons	Tons	Tons	5.75		241,500 00	
Total Roots	38,359				42,000	2,944,380			\$ 3,477,400.00	\$ 2,797,161.00
FODDER CROPS										
Green Feed	1,432,382		Tons	Tons	Tons	Tons	9 00	9 00	\$ 38,674,314.00	\$ 43,691,454.00
Hay and Clover	258,471		3 00	2 00	4,297,146	4,854,606	12 00	10 00	4,652,472.00	3,855,000.00
Alfalfa	48,995		1 50	1 50	387,706	385,500	15 00	14 00	2,204,775.00	1,393,420.00
Fodder Corn	73,700		3 00	2 50	146,985	99,530	3 00	5 00	994,950.00	1,349,440.00
Sunflowers	16,137		4 50	4 00	331,650	269,888	2 50	3 00	400,342.50	481,950.00
Total Fodder Crops	1,829,685		10 00	10 00	160,137	160,650			\$ 46,926,853.50	\$ 50,771,264.00
Total Acreage	10,613,159				5,323,624	5,770,174				
OTHER PRODUCTS										
Alfalfa Seed			Lbs.	Lbs.	Lbs.	Lbs.	.30	.30	\$ 90,000.00	\$ 30,000.00
Honey			300,000	100,000	300,000	100,000	.20	.25	23,000.00	13,750.00
			115,000	55,000	115,000	55,000			\$ 113,000.00	\$ 43,750.00

DAIRY PRODUCTS

No. Creameries	Total Production, Lbs.	Price Lb.		Value	
		1924	1925	1924	1925
Creamery Butter	99 19,500,000	22,335,000	.35 25 .31 5	\$ 6,873,600 00	\$ 7,035,400 00
No. Factories					
Cheese	14 13 1,375,000	1,714,790	.20 25 .15 7	278,400 00	279,887 00
Other Dairy Products				15,850,000 00	15,893,275 00
				\$23,002,000 00	\$23,208,562 00
				\$ 23,002,000 00	\$ 23,208,562 00
				\$ 8,000,000 00	\$ 8,916,000 00
				431,200 00	223,892 79
				2,500,000 00	2,000,000 00
				23,000,000 00	20,772,593 74
				\$ 33,931,200 00	\$ 31,912,486 53
				\$255,992,065. 99	\$215,432,370. 23

Total Estimated Value of all Productions

NOTE: The above Statement is an endeavor to present the actual market value of all the important lines of produce raised in the Province. Certain lines of produce, however, are not marketable as such, but are used as feed crops, and their value would consequently appear again under the item of livestock marketed. The Statement is of value, however, for purposes of comparison with respect to yields and values.

LIVE STOCK, ALBERTA, (FIGURES AS AT JUNE 30, 1925)

	NUMBER		VALUE PER HEAD		VALUE	
	1925	1924	1925	1924	1925	1924
Horses	849,939	875,923	\$60. 00	\$40. 00	\$ 50,996,340 00	\$ 35,036,920 00
Milch Cows	460,722	434,237	50 00	60 00	23,036,100 00	26,054,220 00
Other Cattle	1,066,000	1,195,578	30 00	30 00	31,980,000 00	35,867,340 00
Sheep	236,804	206,458	10 00	10 00	2,368,040 00	2,064,580 00
Swine	914,750	1,016,380	16 00	16 00	14,636,080 00	16,262,080 00
POULTRY:—Turkeys	545,388	593,938	1 90	1 75	1,036,237 20	1,039,392 00
Geese	138,683	112,758	1 05	1 50	145,617 15	169,137 00
Ducks	109,174	119,125	.85	.85	92,797 90	101,256 00
Other Fowl	5,559,472	5,658,960	.50	.50	2,779,736 00	2,829,480 00
					\$127,070,868. 25	\$119,424,405 00

ESTIMATED GRAIN YIELDS BY CROP DISTRICTS, ALBERTA, 1925.
IN ROUND FIGURES.

Fall Wheat.

Crop District	Total Estimated Acreage.	Estimated Average Yield.	Estimated Total Yield.
District No. 1.....	400	7	2,800
District No. 2.....	2,000	25	50,000
District No. 3.....	4,500	18	81,000
District No. 4.....	17,500	15	262,500
District No. 5.....	1,200	20	24,000
District No. 6.....	6,400	24	155,000
District No. 7.....	200	18	3,600
District No. 8.....	100	17	1,700

Spring Wheat.

District No. 1.....	795,000	10	7,950,000
District No. 2.....	1,053,000	19	19,988,000
District No. 3.....	1,625,000	17½	28,437,000
District No. 4.....	674,000	23	15,502,000
District No. 5.....	548,000	20	10,960,000
District No. 6.....	520,000	18	9,360,000
District No. 7.....	335,000	24	8,040,000
District No. 8.....	137,000	16	2,192,000

Oats.

District No. 1.....	119,300	24	2,863,200
District No. 2.....	237,500	30	7,125,000
District No. 3.....	455,000 †	28	12,740,000
District No. 4.....	320,000	35	11,200,000
District No. 5.....	486,000 †	34	16,504,000
District No. 6.....	329,000	27	8,883,000
District No. 7.....	343,500	36	12,366,000
District No. 8.....	107,000	25	2,675,000

Barley.

District No. 1.....	17,700	27	477,900
District No. 2.....	51,600	22	1,135,200
District No. 3.....	46,400	20	928,000
District No. 4.....	78,700	28	2,203,600
District No. 5.....	129,200	25	3,230,000
District No. 6.....	57,600	20	1,152,000
District No. 7.....	155,500	28	4,354,000
District No. 8.....	16,000	20	320,000

Rye.

District No. 1.....	43,000	8	344,000
District No. 2.....	9,000	13	117,000
District No. 3.....	44,000	12	528,000
District No. 4.....	5,700	20	140,000
District No. 5.....	13,800	16	210,800
District No. 6.....	9,700	12	112,400
District No. 7.....	3,600	15	54,000
District No. 8.....	4,500	20	90,000

SUMMARY OF THE ACREAGE AND YIELDS OF THE LEADING GRAINS
DURING THE LAST TEN YEARS
1916 - 1925

	Year	Crop Area	Total Yield in Bushels	Yield per acre Bush.	Average Yield Bush.
Spring Wheat	1925	5,687,449	102,374,082	18.00	15.48
	1924	5,549,552	61,045,072	11.00	
	1923	5,126,643	143,546,004	28.00	
	1922	5,701,041	64,991,867	11.40	
	1921	4,564,290	51,576,000	11.30	
	1920	4,035,003	82,712,738	20.50	
	1919	2,827,935	33,935,224	12.00	
	1918	3,018,371	23,090,544	7.65	
	1917	2,622,853	51,805,839	19.00	
	1916	1,549,075	41,163,471	24.18	
Winter Wheat....	1925	32,300	581,400	18.00	19.15
	1924	24,261	266,871	11.00	
	1923	46,160	1,292,480	28.00	
	1922	64,554	748,826	11.60	
	1921	85,114	1,468,000	17.25	
	1920	37,990	712,777	18.76	
	1919	38,475	639,450	16.62	
	1918	44,065	660,975	15.00	
	1917	51,704	1,023,173	20.00	
	1916	18,663	447,475	23.80	
Oats	1925	2,397,200	74,313,200	31.00	34.24
	1924	1,847,632	55,428,960	30.00	
	1923	2,299,546	114,977,300	50.00	
	1922	1,614,500	34,711,750	21.50	
	1921	2,139,743	64,192,000	30.00	
	1920	3,089,757	115,079,241	37.25	
	1919	2,329,025	65,725,085	28.22	
	1918	2,651,548	60,322,717	22.75	
	1917	2,667,291	85,726,170	32.14	
	1916	1,394,927	60,798,239	43.78	
Barley	1925	552,727	13,818,175	25.00	24.95
	1924	494,718	12,367,950	25.00	
	1923	383,858	14,778,533	38.50	
	1922	378,053	5,632,989	14.90	
	1921	523,891	11,657,000	22.25	
	1920	480,666	12,740,071	26.50	
	1919	412,212	10,562,406	25.50	
	1918	470,073	7,756,204	16.50	
	1917	462,726	9,984,789	22.56	
	1916	297,967	8,477,232	28.64	
Rye	1925	133,398	1,600,736	12.00	14.62
	1924	274,372	2,743,720	10.00	
	1923	396,758	7,621,674	19.20	
	1922	422,500	4,351,750	10.30	
	1921	138,836	1,999,000	14.40	
	1920	160,959	3,419,969	21.25	
	1919	83,032	1,173,256	14.13	
	1918	47,877	825,875	17.50	
	1917	29,997	764,828	26.00	
	1916	10,134	212,503	23.25	

SUMMARY OF THE ACREAGE AND YIELDS OF THE LEADING GRAINS
DURING THE LAST TEN YEARS
1916 - 1925
(Continued)

	Year	Crop Area	Total Yield in Bushels	Yield per acre Bush.	Average Yield Bush.
Flax	1925	5,000	35,000	7.00	6.98
	1924	15,000	75,000	5.00	
	1923	15,000	156,000	10.40	
	1922	22,186	98,727	4.45	
	1921	28,434	171,000	6.00	
	1920	103,689	725,910	7.00	
	1919	47,112	221,897	4.71	
	1918	95,920	479,600	5.00	
	1917	139,527	777,690	5.60	
	1916	43,361	574,700	12.43	
Mixed Grains	1925	15,026	375,650	25.00	29.00
	1924	13,445	403,350	30.00	
	1923	11,228	468,769	41.75	
	1922	14,314	214,710	15.00	
	1921	13,013	278,780	21.50	
	1920	8,398	258,238	30.75	
	1919	26,000	942,500	36.25	
Hay and Clover ..			Tons	Tons	1.42
	1925	1,432,382	4,297,146	3.00	
	1924	257,000	385,000	1.50	
	1923	245,178	401,600	1.65	
	1922	291,723	234,400	0.80	
	1921	454,883	454,883	1.00	
	1920	433,296	476,626	1.10	
	1919	403,333	524,462	1.30	

CREAMERIES AND CHEESE FACTORIES IN ALBERTA, 1925, AND
PRODUCTION BY CROP DISTRICTS.

District.	Milch Cows.	Creamer- ies.	Produc- tion.	Cheese Factories.	Produc- tion.
1.....	39,819	1	229,284	..	.....
2.....	38,743	9	1,002,877	1	34,400
3.....	81,171	15	2,988,640	..	.....
4.....	44,563	16	2,924,698	1	60,240
5.....	86,905	29	5,868,000	4	574,891
6.....	63,038	12	1,920,141	1	105,439
7.....	87,656	14	4,135,660	6	698,865
8.....	18,822	5	475,331	..	.....
	460,722	101	19,544,631	13	1,473,835

GRAIN PRODUCTION IN ALBERTA—1906 TO 1925

Showing Acreage under Cultivation, Yields and Value. Department of Agriculture, Alberta, Publicity and Statistical Branch

Year	Wheat			Oats			Barley			Rye			Flax		
	Acreage	Yield	Value	Acreage	Yield	Value	Acreage	Yield	Value	Acreage	Yield	Value	Acreage	Yield	Value
1906...	223,930	5,932,269	.....	476,511	24,027,071	.....	108,175	3,876,468	.....	7,143	169,451	.....	6,484	86,170	.....
1907...	223,930	4,194,535	.....	476,511	9,247,914	.....	108,175	.....	.....	7,143	.....	.....	.....	.....	.....
1908...	271,000	6,842,000	.....	519,400	22,802,000	\$ 6,316,000	129,800	3,881,000	\$ 1,296,000	6,500	200,000	\$ 116,000	5,920	74,000	\$ 56,000
1909...	385,000	9,579,000	.....	820,000	38,376,000	9,287,000	186,000	5,999,000	2,016,000	6,800	152,000	81,000	5,813	109,000	114,000
1910...	879,301	9,060,210	\$ 6,354,000	783,072	16,099,223	5,152,000	121,435	2,480,165	942,000	6,672	109,000	61,000	31,070	78,480	147,000
1911...	1,639,974	36,602,000	22,544,000	1,122,217	59,034,000	16,530,000	164,132	4,356,000	1,786,000	14,443	394,000	240,000	107,171	1,114,000	1,337,000
1912...	1,590,000	34,303,000	18,459,000	1,461,000	67,630,000	16,231,000	187,000	6,179,000	2,039,000	15,000	377,000	211,000	132,000	1,693,000	1,557,000
1913...	1,512,000	34,372,000	21,009,000	1,639,000	71,542,000	17,170,000	197,000	6,334,000	1,964,000	16,000	398,000	183,000	105,000	1,155,000	1,374,000
1914...	1,371,100	28,859,000	26,403,000	1,502,000	57,026,000	23,972,000	178,000	4,806,000	2,451,000	16,400	360,800	238,000	80,000	614,000	645,000
1915...	2,138,031	66,538,000	58,325,000	1,827,071	83,876,000	25,532,900	304,009	9,822,000	4,340,400	15,963	374,726	232,400	48,000	670,000	966,700
1916...	2,604,975	65,088,000	86,600,000	2,124,081	102,199,000	47,011,500	336,586	9,774,000	6,939,500	17,975	440,000	418,000	95,063	1,310,500	1,389,100
1917...	2,897,300	52,992,100	91,941,300	2,537,900	86,288,600	54,361,800	472,100	10,386,200	1,178,500	30,880	633,000	949,500	139,800	978,600	2,720,500
1918...	3,892,489	23,752,000	45,604,000	2,651,548	60,323,000	44,036,000	470,073	7,756,000	7,523,000	47,877	826,000	1,165,000	95,920	480,000	1,498,000
1919...	4,282,503	34,575,000	79,945,000	2,767,372	65,725,000	42,064,000	414,212	10,562,000	11,513,000	83,404	1,173,000	1,666,000	80,690	222,000	921,000
1920...	4,074,483	83,461,000	126,861,000	3,089,700	115,091,000	41,433,000	480,699	12,739,000	7,898,000	160,960	3,420,000	4,275,000	103,700	726,000	1,329,000
1921...	5,123,404	53,044,000	40,756,000	2,911,743	64,192,000	15,406,000	568,191	11,657,000	3,730,000	222,136	1,999,000	1,239,000	28,434	171,000	219,000
1922...	5,765,595	65,730,693	50,597,868	1,614,580	34,711,750	15,620,287	378,053	5,632,989	2,534,845	422,500	4,351,750	2,611,050	22,186	98,727	154,014
1923...	5,172,643	144,834,000	94,142,100	2,299,546	114,977,300	32,193,644	383,858	14,778,533	5,615,842	396,758	7,616,030	3,274,892	15,000	156,000	254,280
1924...	5,573,813	61,311,943	73,574,332	1,847,632	55,428,960	22,725,874	494,718	12,367,950	7,420,770	274,372	2,743,720	2,606,534	15,000	75,000	139,250
1925...	5,719,749	102,955,482	115,310,140	2,397,200	74,313,200	26,009,620	552,727	13,818,175	5,941,815	133,398	1,600,736	1,040,478	5,000	35,000	61,250

LIVESTOCK INDUSTRY IN ALBERTA
Statistical Table covering years 1917 to 1925 showing numbers and value of different classes of Farm Stock.

Yr.	Number of Live Stock and Poultry in Alberta						Value per Head						Value of Live Stock						All Classes Live Stock
	Fowl						Fowl						Fowl						
	Horses	Milch Cows	Other Cattle	Sheep	Swine	Fowl	Horses	Milch Cows	Other Cattle	Sheep	Swine	Fowl	Horses	Milch Cows	Other Cattle	Sheep	Swine	Fowl	
1917	718,317	325,861	1,209,433	276,966	730,237	3,263,217	\$60.00	\$89.50	\$64.25	\$14.50	\$24.50	.....	\$43,099,020	\$29,083,000	\$77,706,000	\$4,016,000	\$17,708,000	.....	\$171,612,000
1918	791,246	328,702	1,362,880	332,179	601,534	3,022,333	70.00	93.00	70.00	15.00	24.00	.....	55,387,220	30,569,000	95,402,000	4,983,000	14,437,000	.....	200,778,220
1919	800,380	336,596	1,247,448	364,498	445,858	4,426,375	60.00	89.00	60.00	14.00	25.00	.....	48,022,800	29,957,000	74,847,000	5,103,000	11,146,000	.....	169,075,800
1920	741,851	305,607	1,050,334	383,424	286,556	2,399,855	60.00	71.00	45.00	10.00	18.00	\$.94	44,511,060	21,698,000	47,265,000	3,833,000	5,158,000	\$2,260,600	124,725,660
1921	916,510	423,838	1,430,364	523,599	574,318	4,963,565	40.00	48.00	28.00	6.00	13.00	.86	36,660,400	20,312,000	39,448,000	3,348,000	7,188,000	4,251,500	111,207,900
1922	863,316	392,037	1,243,005	410,366	623,188	5,935,325	40.00	50.00	30.00	8.00	18.00	.....	34,532,640	19,601,850	37,290,150	3,282,928	11,217,384	6,586,187	112,691,139
1923	844,519	411,446	1,117,751	335,243	706,753	6,632,645	40.00	50.00	30.00	8.00	16.00	.....	33,780,760	20,572,300	33,532,530	2,681,944	11,308,048	7,621,674	109,497,256
1924	875,923	434,237	1,195,578	206,458	1,016,380	6,484,781	40.00	60.00	30.00	10.00	16.00	.....	35,036,920	26,054,220	35,867,340	2,064,580	16,262,080	4,139,265	119,424,405
1925	849,939	460,722	1,066,000	236,804	914,750	6,352,717	60.00	50.00	30.00	10.00	16.00	.....	50,996,340	23,036,100	31,980,000	2,368,040	14,636,000	4,054,388	127,070,868

MAXIMUM AND MINIMUM TEMPERATURES, PRECIPITATION AND HOURS OF SUNSHINE, ALBERTA, 1925

STATION	Class of Data	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Precipitation for Year	Hours' Sunshine for Year
														Inches	Hours
Lethbridge	Maximum	50	52	65	78	84	92	92	91	85	66	56	61	18.83	2216
	Minimum	-17	-17	-28	19	12	33	43	38	25	-7	7	-4		
	Prec. (inches)	0.37	0.99	2.26	1.99	0.43	3.40	0.82	1.85	4.86	1.68	0.16	0.62		
Medicine Hat	Sunshine (hrs.)	68	107	136	199	336	305	305	318	150	106	118	93	14.61	2270
	Maximum	46	54	62	80	91	99	99	97	91	73	58	60		
	Minimum	-28	-16	-14	26	23	38	45	40	32	-2	4	-21		
Vauxhall	Prec. (inches)	0.26	0.06	0.84	2.66	0.23	3.40	1.32	1.47	3.25	0.29	0.30	0.53	11.41	
	Sunshine (hrs.)	90	85	120	186	347	298	330	310	142	147	124	91		
	Maximum	44	50	65	76	85	96	90	95	87	77	59	62		
Macleod	Minimum	-27	-19	-24	22	19	31	42	36	22	-4	6	-8	20.16	
	Prec. (inches)	0.10	0.10	0.76	1.84	0.40	2.11	0.97	1.33	2.95	0.20	0.15	0.50		
	Sunshine (hrs.)	50	51	60	75	85	94	99	94	85	71	54	59		
High River	Maximum	-20	-19	-29	24	21	35	41	41	25	-1	9	3	24.76	
	Minimum	0.75	0.40	2.01	1.07	0.76	3.04	1.45	4.08	4.23	1.32	0.50	0.55		
	Prec. (inches)	53	49	57	74	80	87	91	89	84	68	56	61		
Calgary	Maximum	-27	-15	-32	14	15	34	33	28	10	-13	1	-5	18.06	2195
	Minimum	0.97	0.55	3.40	1.99	1.37	4.54	2.12	1.76	4.48	2.88	0.40	0.30		
	Prec. (inches)	47	49	60	75	85	88	93	91	83	69	58	62		
Bassano	Maximum	-20	-22	-23	19	20	33	30	31	25	3	3	3	12.88	
	Minimum	0.36	0.41	1.15	0.58	0.58	3.25	2.00	1.21	5.08	1.33	0.64	0.22		
	Prec. (inches)	112	104	152	174	333	270	319	258	143	129	105	96		
Olds	Maximum	45	48	63	79	85	94	98	94	84	60	59	56	20.07	2103
	Minimum	-20	-22	-18	22	27	35	42	40	28	-4	9	-8		
	Prec. (inches)	0.45	0.68	0.67	1.47	1.02	2.78	1.39	0.58	2.64	0.38	0.12	0.70		
Lacombe	Maximum	43	48	48	71	81	91	89	86	75	64	55	57	16.58	2162
	Minimum	-26	20	-21	15	19	30	37	33	19	-12	0	-1		
	Prec. (inches)	0.60	1.65	1.75	1.19	1.20	2.01	2.30	3.27	3.58	1.04	0.38	1.10		
Lacombe	Sunshine (hrs.)	91	98	146	178	303	281	312	249	126	126	126	65	16.58	2162
	Maximum	43	51	56	72	86	96	96	97	83	66	52	51		
	Minimum	-33	-30	-32	17	18	33	33	30	25	-11	-7	-7		
Lacombe	Prec. (inches)	0.35	0.35	0.45	0.72	1.53	1.32	1.32	3.87	3.37	1.31	0.90	0.90	16.58	2162
	Sunshine (hrs.)	85	81	141	247	303	352	306	222	112	116	100	57		

Edmonton	Maximum Minimum Prec. (inches) Sunshine (hrs.)	43 -30 0.98 72	44 -32 0.63 61	51 -21 2.56 149	71 20 1.07 230	87 26 1.07 315	85 35 2.43 298	87 39 1.69 322	90 31 2.61 249	90 31 0.98 149	82 18 1.29 130	63 -4 0.80 118	48 -20 0.67 52	17.41	2145
Red Deer	Maximum Minimum Prec. (inches)	44 -32 0.78	50 -32 0.78	55 -30 0.44	75 17 0.91	86 19 1.60	93 32 3.99	93 36 1.74	93 30 4.50	81 25 4.01	64 -15 1.33	50 -5 0.81	50 -3 0.95	21.84	
Stettler	Maximum Minimum Prec. (inches)	40 -32 0.63	42 -24 0.58	49 -16 1.03	69 14 2.48	..... 1.72	.....	98 40 1.93	84 32 2.08	76 27 2.28	55 -6 0.94	46 -15 0.65	55 -6 1.30	15.62 for 11 mos.	
Vermilion	Maximum Minimum Prec. (inches) Sunshine (hrs.)	36 -49 0.66 82	42 -40 1.25 83	40 -35 0.25 117	72 13 2.63 227	85 20 1.41 300	88 34 2.71 301	86 32 0.65 306	95 35 2.59 270	80 18 2.01 170	61 -6 1.36 129	50 -19 0.35 92	54 -27 0.90 57	16.77	2134
Athabasca	Maximum Minimum Prec. (inches)	30 -42 1.65	39 -35 1.32	52 -38 1.06	69 10 1.22	87 20 2.10	86 34 2.03	85 36 2.73	89 31 1.33	82 6 0.80	63 -12 0.65	54 -29 0.60	50 -15 1.29	16.78	
Grande Prairie (Exp. Farm)	Maximum Minimum Prec. (inches) Sunshine (hrs.)	38 -29 1.27 73	35 -33 1.79 101	50 -21 1.70 163	69 11 0.13 236	81 26 0.93 358	85 36 1.23 300	90 38 2.50 302	84 33 3.50 193	81 23 2.45 177	63 -11 1.41 131	50 -10 1.12 39	48 -9 2.51 39	20.35	2185
Fort Vermilion	Maximum Minimum Prec. (inches) Sunshine (hrs.)	11 -65 1.70 69	20 -66 0.25 113	45 -37 0.10 148	67 -6 1.38 193	83 20 1.05 269	89 31 0.57 323	86 38 2.50 302	89 27 3.80 199	86 19 0.68 217	60 -10 0.23 129	38 -37 0.05 76	33 -40 0.09 22	12.40	2060
Edson	Maximum Minimum Prec. (inches)	43 -29 1.00	48 -35 1.20	51 -33 0.60	86 17 0.64	83 22 0.40	86 29 2.94	92 36 2.54	85 32 6.28	84 25 2.46	67 -13 1.33	59 -43 1.25	58 3 1.65	22.29	

FROST-FREE PERIOD—ALBERTA. TABLE SHOWING DAYS FROST-FREE, LAST SPRING FROST, AND FIRST FALL FROST ELEVEN YEAR PERIOD—1915 TO 1925

(Corrected March, 1926)

Year	Medicine Hat		Calgary		Lethbridge		Vermilion		Edmonton		Athabasca		Ft. Vermilion		Peace River									
1915	130	May 6	Sept. 13	82	May 21	Sept. 11	118	May 16	Sept. 11	82	June 18	Sept. 8	86	June 14	Sept. 8	68	July 1	Sept. 7	65	July 3	Sept. 6	109	May 15	Sept. 1
1916	121	May 16	Sept. 15	113	May 24	Sept. 14	105	June 1	Sept. 14	70	June 1	Aug. 10	70	June 1	Aug. 10	67	June 5	Aug. 11	48	June 26	Aug. 13	63	June 8	Aug. 10
1917	98	May 30	Sept. 5	89	June 4	Sept. 1	89	June 4	Sept. 1	56	June 13	Aug. 8	85	June 13	Aug. 8	56	June 13	Aug. 8	15	June 24	July 9	70	June 13	Aug. 23
1918	122	May 9	Sept. 9	54	June 1	July 25	107	June 1	Sept. 15	48	June 2	July 19	52	June 2	July 24	49	June 5	July 24	15	June 2	July 24	120	June 5	July 24
1919	144	May 7	Sept. 27	119	June 1	Sept. 27	121	June 1	Sept. 27	118	June 1	Sept. 26	94	June 1	Sept. 26	85	June 1	Aug. 24	52	June 1	July 25	120	June 1	Sept. 28
1920	117	June 1	Sept. 26	80	June 10	Aug. 29	117	June 10	Sept. 27	68	June 12	Aug. 19	88	June 12	Sept. 9	36	June 1	July 13	34	June 1	July 11	116	June 4	Sept. 28
1921	105	May 28	Sept. 10	94	May 30	Sept. 2	103	May 28	Sept. 9	95	June 2	Sept. 6	96	May 28	Sept. 2	92	June 2	Sept. 9	...	...	...	102	May 30	Sept. 9
1922	148	May 11	Oct. 6	92	June 6	Sept. 6	142	May 13	Oct. 2	91	June 7	Sept. 6	91	June 7	Sept. 6	94	June 7	Sept. 9	...	...	...	74	June 6	Aug. 10
1923	130	May 15	Sept. 23	106	May 29	Sept. 11	118	May 16	Sept. 11	76	May 19	Aug. 3	111	May 24	Sept. 11	69	May 24	July 31	104	May 30	Sept. 11	76	June 13	Aug. 28
1924	140	May 8	Sept. 25	103	June 9	Sept. 20	117	May 26	Sept. 20	82	June 21	Sept. 11	82	June 22	Sept. 12	67	June 25	Aug. 31	78	June 13	Aug. 30	...	...	...
1925	134	May 10	Sept. 21	114	May 25	Sept. 16	126	May 17	Sept. 20	112	May 29	Sept. 18	123	May 10	Sept. 10	116	May 15	Sept. 8	...	...	...	...	...	...

SIX DEGREE FROST PERIOD—ALBERTA. TABLE SHOWING DAYS AND DATES IN TEN YEAR PERIOD—1915 TO 1925

Year	Medicine Hat		Calgary		Lethbridge		Vermilion		Edmonton		Athabasca		Ft. Vermilion		Peace River									
1916	154	May 8	Oct. 18	139	May 12	Sept. 28	143	May 8	Sept. 28	120	June 1	Sept. 28	160	April 24	Oct. 1	116	May 8	Sept. 1	...	...	...	115	June 1	Sept. 23
1917	166	May 5	Oct. 18	166	May 5	Oct. 18	150	May 1	Sept. 28	116	June 1	Sept. 24	118	May 30	Sept. 25	116	June 2	Sept. 25	...	...	...	124	May 3	Sept. 4
1918	166	May 9	Oct. 22	152	May 23	Oct. 22	149	May 26	Oct. 22	136	May 17	Sept. 30	153	May 8	Oct. 8	114	May 31	Sept. 24	...	...	...	137	May 16	Sept. 30
1919	173	April 9	Sept. 29	146	May 4	Sept. 27	146	May 6	Sept. 27	122	June 1	Sept. 30	136	May 14	Sept. 27	114	May 6	Sept. 27	...	...	...	120	June 1	Sept. 28
1920	171	April 26	Oct. 15	162	May 5	Oct. 14	145	May 3	Sept. 27	114	June 1	Sept. 18	152	April 29	Sept. 16	114	May 31	Sept. 28	...	...	...	145	May 6	Sept. 28
1921	209	April 11	Nov. 7	197	May 10	Sept. 10	137	May 28	Sept. 13	134	May 27	Sept. 13	164	April 28	Sept. 10	121	June 7	Sept. 11	...	...	...	153	April 7	Sept. 9
1922	181	April 18	Oct. 16	154	May 6	Sept. 10	175	April 19	Oct. 11	117	June 7	Oct. 2	175	April 23	Sept. 16	121	June 24	Sept. 14	...	...	...	171	April 20	Oct. 8
1923	149	May 15	Oct. 1	130	May 15	Sept. 22	142	May 3	Sept. 22	122	May 17	Sept. 16	130	May 15	Sept. 22	114	June 24	Sept. 14	...	...	...	...	...	...
1924	168	April 25	Oct. 10	149	April 25	Sept. 20	143	May 6	Sept. 26	121	May 22	Sept. 20	143	May 19	Oct. 9	83	June 21	Sept. 2	...	...	...	146	April 25	Oct. 18
1925	144	May 10	Oct. 1	133	May 10	Sept. 20	131	May 12	Sept. 20	132	May 9	Sept. 18	133	May 10	Sept. 20	132	May 11	Sept. 20	...	...	...	...	...	...

Figures compiled from Dominion Meteorological Records.

Report of the College of Agriculture

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

The enrolment of students in the College of Agriculture for the year 1925 was as follows:

Spring term.....	136
Fall term.....	66

The discrepancy between the spring and fall terms is explained very largely by the fact that in the spring term is recorded our short course and special students, last year 86 in number. This would indicate a slight falling off in our degree students which may be due to raising the standard of entrance, but we feel sure also that the very unfavorable fall which prolonged threshing operations until December has affected the attendance in agriculture as well as in other faculties of the university. Our enrolment in the first year is the smallest for some years. This taken in connection with the fact that we graduated nineteen students during the year will account for some of the difference in registration.

The following is the report by departments of the College of Agriculture:

DEPARTMENT OF HORTICULTURE.

The instruction in horticulture consists of one compulsory course in vegetable, and flower gardening with some practical work, for the first year students, and two optional courses for the third and fourth year men. The work of the third year is concerned with the growing of small and tree fruits, the beautifying of the home surroundings and the growing of windbreaks and shelter belts. Work is also given in the propagation of trees and shrubs from seed, by means of cuttings and layers, and through budding and grafting, so that the students shall be able to do all this kind of work on their own places. The fourth year work goes into the principles underlying horticultural work, the construction and management of green houses for classroom material and as a practical work room.

DEPARTMENT OF ENTOMOLOGY.

Insect Collections.—Considerable progress has been made in developing the university collection which now contains several thousands of species. These are arranged in four series: 1. General working collection; 2. classroom material; 3. reference collection of species that are found in Alberta; 4. Riker mount exhibit showing life-histories of species.

Cutworms—A severe outbreak of the Pale Western Cutworm caused heavy losses to many farmers over a somewhat extensive territory in Central Alberta. At the request of the provincial department of agriculture the affected territory was visited repeatedly for the purpose of conducting meetings and holding field demonstrations. These outbreaks are always the result, either directly or indirectly, of variations in climate conditions. We are now gathering data along these lines and believe that in a few years' time we shall be able to prepare, by the middle of July in any year, a map of the Province on which will be shown where damage from cutworms may be expected in the following year. This would give farmers ample time to modify their cultural practices during the remainder of the season with a view to avoiding unnecessary losses.

Wheatstem Sawfly—During recent years reports have led us to believe that the Wheatstem Sawfly is becoming established in various localities in Alberta. No very definite information has however, been available. Under the auspices of the department of agriculture a survey was undertaken at about harvest time when the presence, or otherwise, of the pest is most readily seen. A far larger area was found to be infested than had been previously recorded. Up to the present time losses have not been severe. It must be realized, however, that our farmers are faced with experiencing, in a few year's time, losses similar to those which now occur annually in Manitoba and Saskatchewan, unless this pest can be checked in the incipient stages of its establishment.

Wireworms—In no country have very satisfactory methods for controlling these pests been developed. This applies particularly in territories, such as our own, in which control by means of rotations is impractical.

In addition to the general lack of success that has attended efforts to discover methods for the control of wireworms, the farmers of Alberta have been at a disadvantage, in that the life-histories and the habits of the species that occur here have never been fully investigated. There even has been considerable uncertainty as to whether such wireworm damage as was reported was actually due to true wireworms or to the larvae of various species of *Eleodes*. These are the so-called "false wireworms" which resemble the true wireworms both in appearance and habits. These are known to be widely distributed, and sometimes to be very abundant, in various parts of the Province.

For this reason a request was made to the Dominion Research Council for a small grant for the purpose of conducting a three-year investigation into the bionomics and possible control of the wireworms and false wireworms of Alberta and adjacent territory. The investigation was begun during the past summer. Considerable difficulty was experienced in finding a locality in which material both for field and for laboratory studies were available, and we finally accepted the kind offer of the Dominion entomological branch of the use of their laboratory at Lethbridge as the headquarters for the investigation.

As a result of our season's work we can definitely state that, at the present time, the most widespread damage arises from the larvae of *Ludius acripennis*. This species has a wide distribution over the North American continent but, with the exception for the prairie provinces, it appears nowhere to occur in sufficient abundance to constitute a menace to grain or other crops. Our studies into habits and natural control factors lead us to believe that the numbers of this pest can be greatly reduced in Alberta by comparatively slight modifications in the general practised methods of summerfallowing.

Grasshoppers—Difficulty is still being experienced in terminating the outbreak of this pest in the Peace River district. Elsewhere in the Province there has been no sign of a recurrence of trouble from this source.

Army Cutworms—This readily controlled cutworm destroyed the stand on a few fields in the extreme south of the Province before its presence had been observed by the owners of the affected fields.

Beet Webworms—The adults of the first generation of this insect were so abundant in Southern Alberta that there was every indication of the newly established industry of sugar beet production receiving a severe setback owing to the possible destruction of entire fields of beets later in the season when the second generation of caterpillars began to migrate. For this reason the head office of the sugar company at Utah was warned of the approaching danger. A representative, Dr. E. S. Titus, who had had considerable experience with this pest in Utah, was sent up to investigate conditions in Alberta. So serious did he consider the situation to be that he immediately took steps for concentrating in Alberta all of the suitable spraying machinery that could be located in Canada and in Utah. We were asked to keep close watch on the development of the eggs in the ovaries of female moths in order that we might warn the company of the approach of the egg-laying period. At the time when the first ova were found to be maturing the entire beet-producing area was visited by a series of excessively heavy thunder storms. Nearly all of the moths were killed before they had oviposited, and we were able to report to the sugar company that they could cancel all arrangements in connection with spraying the beets. It was extremely fortunate that, in the first year of its inception, the beet-producing industry escaped what appeared to be certain loss from the beet webworm.

Grain Aphis—In several districts aphids were very abundant on oats at harvest time, and they caused some alarm. As in other years of abundance, however, they caused no appreciable losses.

Tent Caterpil —The outbreak of this pest, which, in the neighborhood of Edmonton, entirely defoliated poplar and other trees during the summer of 1923 and 1924 has been terminated

by natural causes in this district. In Alberta the only complaints of its presence were received from some districts in the foothills and in the neighborhood of Camrose. In parts of Saskatchewan, however, the outbreak continues with unabated vigor.

DEPARTMENT OF AGRICULTURAL ENGINEERING.

This work covers three fields, farm machinery, farm buildings and farm motors.

The department has given material assistance to the international tractor short course, and to dealers' convention. There is evidently an earnest effort on the part of the various implement companies to co-ordinate the efforts of their field men and to secure a very broad attitude toward the services the companies may offer. Our department of agricultural engineering has been of material assistance in this direction.

As in other years we are glad to take advantage of this opportunity to express our appreciation of the co-operative spirit shown by the various implement companies. They have kept us supplied, to the limit of our present space, with machinery for laboratory work. Three of the companies procured for us sectional models at considerable expense, and the co-operation just mentioned has enabled us to put on a very comprehensive course for our students.

At the time of the Calgary and Edmonton exhibitions considerable emphasis was placed upon the horse-pulling contests. This department was glad to be of assistance in the conduct of these contests.

The work of the extension of the services of this department is getting well under way through its bulletins, is radio service, and in the question and answer field.

DEPARTMENT OF DAIRYING.

Regular Courses—The department of dairying put on four courses in the degree work of the university; one of these, being a required course, deals with home dairying in general, and the others—elective courses—deal with certain phases of commercial, or factory dairying.

Special Courses—In addition to the regular courses of instruction already referred to, four special creamery courses of three weeks each were given jointly with the provincial department of agriculture, during the year. These special courses are planned more particularly for the benefit of people who have had some practical experience in creamery operations and who may wish to spend a short time in a systematic study of the more important principles upon which the practical work is based. Following are the dates and attendance of each of the special courses:

	Students
January 5th–24th, 1925.....	26
February 23rd–March 13th.....	29
March 30th–April 17th.....	22
December 1st–18th.....	9

The special course students registered from thirty-four different points in Alberta and three points in Saskatchewan.

Bacteriological Work—Another important line of work was undertaken jointly by the department of agriculture and the university during the year; namely, the analyses for moulds and yeasts of some 900 lots of creamery butter. The samples were taken from the lots of butter shipped to the provincial butter grading stations at Edmonton and Calgary, representing practically the normal butter production of the various creameries in the Province. The results of the analyses are promptly communicated to the operators of the creameries concerned so that they may locate the sources of mould and yeast contamination, if any, both in equipment and methods, and promptly apply effective remedies.

It has been shown that the "mould and yeast count" of butter affect, to some extent, its keeping quality, and also that this test is, in a large measure, indicative of the sanitary condition of the equipment used in its manufacture.

The department is indebted to the faculty of medicine for the use of a well equipped laboratory for carrying on this important work.

DEPARTMENT OF VETERINARY SCIENCE.

We are indebted to the department of agriculture for assistance in that the provincial veterinarian is also our teacher in veterinary science. He gives lectures in anatomy, physiology, materia medica, surgery, parasitology and obstetrics. A comparatively small time is employed in teaching anatomy and materia medica, it being felt that the major part of the time should be devoted to dealing with problems and diseases peculiar to our own province. In this connection the students are kept in touch with the experiments now being carried on in Alberta, in the hope that when these investigations are completed the students will be armed with material which it would be impossible to secure elsewhere. A great deal of this investigational work is being carried on in co-operation with the animal husbandry department, and also with members of the department of bacteriology. This has facilitated the investigation of certain problems which are causing intense interest among the livestock breeders of the present time. Following is the verbatim report, from the provincial veterinarian, of the work carried on in this department.

The problems to which we have paid particular attention are: contagious abortion in cattle, iodine deficiency and tuberculosis.

In the first mentioned disease we were particularly fortunate in having a considerable number of cows in the university herd which had been aborting. In addition to this trouble they also suffered severely from vaginitis or metritis, a condition which is becoming more frequent throughout the Province each year. We were able in this herd to try the administration of the Bowman

Abortive Remedy, which obtained some notoriety during the past few years as a preventive agent. This preparation, after numerous trials, has been found wanting in many respects, and we are satisfied that the only way to combat contagious abortion successfully is along more scientific lines. For this reason we injected a number of cows, which had aborted, with a living organism (*bacillus abortus vaccine*). These animals were not bred for two months following vaccination, and we are safe in saying that beneficial results were obtained following its use. We also tried the injection of killed organisms (*vaccine abortus bacterin*) as a preventive agent and in certain individuals the results were satisfactory. We have also tried the inoculation of young calves with a vaccine, a few days after birth, the object being to follow a history of the calves for a number of years to see if immunity has been conferred.

The treatment of sterility cases is also causing us considerable thought. We believe that this work could be extended greatly, as it is one of the biggest problems with which the livestock breeder has to contend.

Extensive reports have been issued from time to time regarding the administration of potassium iodide or tincture of iodine as preventives against goitre in lambs and calves, as well as against "hairlessness" in young pigs. Work is being carried on at the university farm under the animal husbandry men and it is not necessary for me to draw attention to the experiments carried on by them. Additional experimental work is also being conducted at one of the demonstration farms, namely, Claresholm. We have had a serious time with iodine deficiency at various intervals here, and during the past few weeks we have been carrying on an experiment in the feeding of potassium iodide to hogs under feed. We were astonished to discover that those animals which were given two grains of potassium iodide per day made a very much greater gain than those receiving none, and we are now feeding the same amount to others to see if our first test was correct, before making any further statements.

The problem of tuberculosis in cattle is not only of vast importance to the individual stock breeder, but to the whole of the Dominion. The loss to the owners of tuberculous cattle is enormous and the situation has reached such a stage that many breeders are completely discouraged and are going out of the breeding of pure bred cattle entirely. It is also having a detrimental effect upon those people contemplating the raising of pure bred live stock. For these reasons it is imperative to do all that lies in our power to try to discover some way to prevent the occurrence of this disease.

On various farms we are trying out the inoculations of vaccines in the way of prevention, and we have, at the present time, a number of calves under experiment at the university farm. These calves have been inoculated with Raw's vaccine in the hope that one way may be discovered which will do away with the necessity of slaughtering infected animals, as has been the practice

for the past number of years. It is the intention to remove the calves under experiment to a centre where the experiments may be carried out to a more satisfactory conclusion. This vaccine is prepared from killed cultures of tubercle bacilli which have been attenuated for over sixteen years by Dr. Nathan Raw, and the present strains represent the 218th generation. They are quite non-virulent and non-toxic and will not produce the disease in animals, even if given in large doses of the pure culture.

Other vaccines are being tried out by Dean Rankin and myself, but these are not being used on the university herd.

DEPARTMENT OF SOILS.

Aside from the work in connection with teaching the research work of the department was carried along the same lines as in 1924, except that certain extensions were found necessary in connection with some of the projects.

The various lines of work pursued were as follows:

1. Soil survey.
2. Experimental work in soils (plot work).
3. Availability of plant-foods under field conditions (decomposition of the soil's organic matter).
4. Analysis of miscellaneous samples:
 - (a) Soil samples sent in by farmers.
 - (b) Alkali soil samples.
 - (c) Drainage waters.
5. Other research problems.

1. During the summer of 1925 the field work of the soil survey was confined to the Sounding Creek sheet, where the work begun the previous year was extended from Range 5 to the west sufficiently to include Range 13, Townships 25 to 32 inclusive. This area lies north and south of, and adjacent to, the Goose Lake line of the C.N.R., and extends from the eastern boundary of Alberta to Hanna.

Approximately one million acres were surveyed during the past summer. This, added to the surveys previously completed, would bring the total up to approximately six and three-quarter million acres.

The analytical work for the Medicine Hat sheet has been completed and a report will be prepared during the early part of 1926. This report will cover the area from the east of the Macleod sheet to the Alberta-Saskatchewan boundary including Townships 9 to 16 inclusive (2,073,600 acres.)

Part of the analytical work for the Rainy Hills sheet and the Sounding Creek sheet were likewise completed during the year.

At the request of the Minister of Agriculture, the report of the soil survey of the Macleod sheet was published by the university as Bulletin II. This may be obtained from the department of agriculture or the extension department of the university.

2. The results from the soils experimental plots for the past year show rather wide variations in yields, and it will be necessary to postpone soil treatments for at least one more year.

3. This work was continued during the year 1925, and the results obtained confirm those of 1923 and 1924. For the year 1926 it is planned to extend this work sufficiently to obtain comparisons between soil and climatic conditions of the southern and northern areas of Alberta. The results for the years 1923 and 1924 are now being prepared for publication in scientific journals. These data tend to explain the extremely high native fertility of our Edmonton soils and the rapid rate at which plant foods are made available when proper rotation and cultivation methods are followed:

(a) The plot growing cereals every year shows a variation for the season of from 32 to 98 pounds of nitrate nitrogen per acre.

(b) The summer-fallow plot shows a corresponding annual variation of from 58 to 330 pounds of nitrate nitrogen per acre.

(c) The intertilled crops permit of more rapid nitrification than do the non-tilled crops.

(d) The perennials, both legume and non-legume keep the nitrate content of the soil lower than do the annual crops.

(e) When the legumes are broken the soil produces nitrates more rapidly than when non-legumes are broken. Thus the common observation of increased crops following legumes.

(f) With the summer-fallow and intertilled crops some nitrates are leached into the lower depths of soil following heavy rains. This is less apparent with non-tilled and perennial crops.

(g) The ammonia nitrogen is invariably higher than the nitrate nitrogen in the surface soils of the Edmonton district. This fact is new as the authorities on soils state that the reverse is true.

4. Numerous samples of soil sent in by farmers were analysed and reports submitted. Analyses were made on approximately 40 samples of drainage waters, and 70 samples of alkali soils.

5. In addition to the above mentioned routine activities special research problems have been pursued. Those mentioned in the 1924 report have been continued and extended together with the following two new projects:

"Possible Plant Food Deficiencies in some Alberta Timber Soils," and
"Possible Symbiotic Fixation of Nitrogen by Non-leguminous Plants."

The first of these two problems has shown very promising preliminary results and it is hoped that some economic plan may be evolved which will be practicable for the farmers on soils similar to these. The application of certain minerals has given increases of 66% in the yield of barley.

DEPARTMENT OF FIELD HUSBANDRY.

I. *Instructional Work*:—Though the investigational work of the department of field husbandry is probably of greatest interest to the general public, on account of its direct relation to many of the important practical problems connected with crop production in Alberta, the teaching program continues to absorb a large

proportion of the time and energy of the staff, and is not without its features of general interest. The arrangement of our courses is now closely connected with the investigational interests of the staff. This is of especial importance in senior or graduate courses.

II. *The Multiplication and Distribution of Seed*:—The department continues its co-operation with the Alberta Seed Growers' Association, and with seed growers generally, by multiplying new or superior varieties for sale in small quantities as foundation stock. The price is set just high enough to ensure the good faith and interest of the individuals who secure seed, and not with a view of making a profit for the department, since the cost of producing such special seed is very high. The following seed was distributed in this way in the spring of 1925:

Wheat—Renfrew	338 bus.
University No. 222	333 "
Marquis (1st Gen.)	32 "
Oats—Banner (1st Gen.)	26 "
Victory (1st Gen.)	84 "
Barley—Canadian Thorpe (Elite)	12 "
O.A.C. No. 21 (Elite)	33 "
Alberta Beardless	7 "
Winter Rye—Dakold (Elite)	3 "
Peas—Golden Vine (Elite)	8½ "
Corn—Howes' Alberta Flint	20½ lbs.
Red Clover—Altaswede	69 "
Western Rye Grass—Fyra	303 "
Timothy—Swallow (Svalof No. 523)	56 "

During the summer and fall we have received a number of letters giving reports on the crops grown from this seed. Renfrew and University No. 222 wheats were commented upon very favorably. The Renfrew reports were confined to the district outlined by Camrose, Lloydminster, Provost, and Irricana. The yields obtained ranged from 21 to 62 bushels per acre, and in only one case, that from Paradise Valley (Lloydminster) where it yielded 21 bushels, did Renfrew yield less than Marquis.

The reports for University No. 222 were received from a much wider area, coming from Penhold to the south, Lost Lake (Peace River) to the north and west, and Vegreville to the east. All reports were very favorable for this wheat, with the exception of one from Tofield, in which the grade was stated to be unsatisfactory.

With reference to Howes' Alberta Flint Corn, it should be pointed out that the smallness of the amount distributed directly by the university was owing to a lack of seed and not to a lack of demand. This variety is increasing rapidly in popularity, as the earliest maturing sort producing a profitable yield of ears. Requests for seed from other parts of the country and from the United States are becoming more numerous. Several such enquirers last spring were put in touch with growers in the south of the

Province having available stocks of seed. It may be mentioned here that in our rod-row tests this year, of eighty-five varieties and strains, only Pickaninny, a small black-kerneled variety, nearly equalled Howes' Alberta Flint in yield of mature ears.

Recently we have had a request from the United States department of agriculture to be put in touch with commercial sources of Altaswede clover seed, as it appeared likely to be a useful crop in some parts of the United States.

The failure to distribute any elite stock used of Marquis wheat was owing to our dissatisfaction with the standard of purity of the stocks which we had available. In harmony with our own resolution put forward at the Guelph meeting of the Canadian Seed Growers' Association in 1924, that all such stocks should be periodically re-selected, we carried out an extensive plant selection that year, and multiplied the product in 1925. The re-selected stock, however, being still unsatisfactory, has now been entirely withdrawn, and will be replaced as soon as possible by one of a large number of pure line selections we have under test.

III. *Variety Tests*:—The yields obtained in a few of the more interesting crop variety tests will be given.

Wheat	1925 Bushel	Av. 1923-24-25 Bushel
Marquis	44.6	45.5
Renfrew	52.7	51.6
University No. 222	55.4	50.5
Ruby	42.8	39.1
Kota	48.2	44.0

Renfrew is about four days later than Marquis, so is recommended only for the south and east of the Province, where its longer straw and higher yielding capacity are valuable characters, University No. 222, a selection from Red Bobs, ripens about four days earlier than Marquis, and was introduced to replace the early but rather low-yielding variety Ruby. Kota has been advocated extensively on account of its rust resistance, but unfortunately it possesses a weak straw and inferior milling quality.

The forgoing tests were carried out on plots one-hundredth acre in size, each variety planted in quadruplicate. The following additional figures were obtained in 1925 from rod-row plants, also in quadruplicate. As the plots were widely distributed over the block of land used, probably the fairest comparison may be based on the average yield of the four check plots of Marquis nearest to the four plots of any variety in question.

Variety	Length of growing period Days	Yield per acre Bushel	Yield of nearest check plot Bushel
Garnet	93	56.7	59.6
Reward	95	45.8	59.6
University No. 222	96	62.9	50.0
Early Triumph	98	64.6	57.9
Supreme	102	55.0	57.9
Ceres	97	67.5	57.9

The first two of the foregoing varieties are new early wheats now being introduced by the Dominion cerealist. The next three are selections from Red Bobs, including our University No. 222 and two selections made by Mr. Seager Wheeler. Ceres is a new variety produced by Professor L. R. Waldron, North Dakota. The Ottawa varieties are superior in earliness, though they do not compare favorably in yield with the Red Bobs selections. Not too much importance should of course be placed on the results of one year's test.

Barley—Tests on one-hundredth acre plots, in quadruplicate:

	1925 Bushel	Av. 1923-24-25 Bushel
Barks	66.4	65.5
Manchurian	50.9	56.3
Canadian Thorpe	48.7	56.0
O.A.C. 21a	46.2	52.3

The high yield of Barks is partly offset by its comparative lateness of maturity. This renders it unsuitable for the northern or foothill districts of the Province. It is also a poor malting quality. Manchurian and O.A.C. No. 21 are the best varieties for the latter purpose. Canadian Thorpe is the standard two-rowed variety, recommended especially for the drier districts.

From the rod-row test results have been selected the following figures for four high-yielding strains of smooth-awned barley produced here.

Hybrid	Yield per acre Bushel	Yield nearest checks of O.A.C. 21a Bushel
Lion x Can. Thorpe	96.3	96.3
O.A.C. 21 x Lion	90.1	96.3
265 x O.A.C. 21	100.5	96.3
O.A.C. 21 x 265	94.3	96.3

Susceptibility to smut has made most of our smooth-awned hybrids unsuitable for general use, but the foregoing strains were all entirely free from this disease. Weakness of straw has been another common defect, but these strains, while they still leave something to be desired in this respect, are practically equal in strength to O.A.C. No. 21.

Flax—The average yield per acre of three varieties of flax tested in rod-row plots were: Premost, 18 bushels; Longstem, 10 bushels; Big Crown, 9.5 bushels.

IV. *Miscellaneous Field Experiments*—Experiments on the effect of frequency of cutting on the yield of alfalfa in succeeding years showed that the best crop is obtained following a seed-crop, which is cut only once, in late summer. In this case the absence of any residual top growth to protect the crowns over winter is apparently more than compensated by the additional food reserves

in the crowns and roots. Frequent cutting induces continuous vegetative top growth, depleting the root reserves. This conclusion is the same as that reached on observing the behavior under various cutting treatments of both alfalfa and red clover during the period 1919-22.

The yield of alfalfa grown in rows 8 to 30 inches apart has averaged for the past three seasons from 6.7 to 8.2 tons per acre, green weight, from two cuttings. The distance of planting appears to have little effect on the yield of hay, until the rows are more than 24 inches apart. If this distance is exceeded the yield falls off.

Altaswede clover planted in 1923, in three large plots with rows 8.18 and 30 inches apart, yielded for these respective distances of planting, 6.5, 8.2, and 6.1 bushels of seed per acre. The yields from the same plots in 1924 were 8.2, 8.2, and 6.3 bushels. This shows that this variety, when it winters satisfactorily, can be depended upon to produce more than one good seed crop.

As nurse crops for Altaswede clover, wheat, barley and oats proved to stand in this order of relative suitability.

In an experiment with timothy and Western rye grass the seed yield of the former increased with distance between rows up to 3.8 lbs. per acre at 30 inches, whereas the latter reached a maximum of 993 lbs. at 18 inches, and decreased with wider planting. This is what we should expect from the relative drought resistance of these crops, Western rye being able to make a much more complete use of the moisture in the soil.

A number of experiments in co-operation with other institutions were continued during the past year. A nursery of wheat and oat varieties was grown for the Dominion botanist, to secure data on the prevalence of rusts and smuts. The experiment of rates of seeding oats for the research council advisory committee on experimental methods, was repeated. The rod-row test of 28 varieties of winter wheat was carried out again in co-operation with the United States Department of Agriculture. It is of interest to note that nine of these varieties showed a survival between 90 and 100%, and that the yields of all 28 varieties ranged from 25 to 70 bushels per acre, with 39 bushels as an average.

V. *Plant Breeding*:—During the past season the plant breeding work with cereals included four foundation beds, 396 centgeners, and yield tests of 191 strains in 2,292 rod rows. The foundation beds included Banner and Victory oats, and Canadian Thorpe barley. Many of the centgeners consisted of selections from the previous season's foundation beds of Renfrew, University No. 222 and Marquis wheats, and O.A.C. No. 21 barley. These are being studied and selected in order to purify and improve our stocks of these crops for distribution. It is planned to put all remaining varieties of which elite stock seed is distributed from this institution, into foundation beds next year. The remainder of the centgeners and the rod-row tests were taken up with miscellaneous selections, crosses, and introductions.

Breeding work with forage crops included tests of 206 strains of corn; the continued head selections of three in-bred strains of sunflowers; the propagation of 300 plants from in-bred seed of Swallow Timothy; the introduction of five grasses and clovers for preliminary tests of adaptability; and the commencement of a new project with Altaswede clover. This variety is far from uniform in type, and seems to present possibilities for the selection of strains more winter-hardy and resistant to root-rots than the present stock.

Another important new project was begun with alfalfa. In conformity with our agreement at the 1924 meeting of the Canadian Seed Growers' Association, a large block of individual plants was set out with seed representative of the registered fields in the Brooks area, as well as a number of other varieties and strains. This will enable us to determine the degree of morphological similarity between the plants of a given strain, information which is needed in order to make possible the setting of standards for registration. The project will also provide opportunity for the selection of superior plants.

Tuber-hill selection of potatoes was successful in eliminating practically all diseases, but scab. Out of 100 such selections only one showed rhizoctonia and one mosaic. Yield tests of 74 selections in rod-row plots gave results varying from 350 to 550 bushels per acre, with an average of 390 bushels.

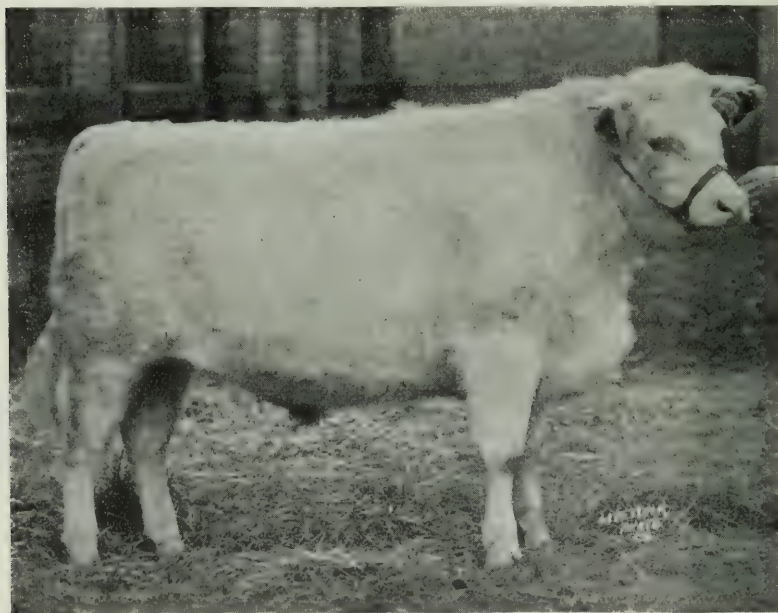
VI. *Special Investigations—Origin of False Wild Oats*—The investigation of this problem has been continued by a graduate student, his work during the summer being financed by a grant of \$500.00 from the research council. It has been shown that false wild oats do not arise from wild oats, neither can they give rise to wild oats. The evidence is that they arise by mutation from cultivated varieties. Since they have not the property of delayed germination, characteristic of wild oats, they cannot be considered a serious weed menace. A general discussion of the subject was published in *Scientific Agriculture*, September, 1925, and a summary of cytological findings in "*Nature*," May 9, 1925.

Sterility in Alfalfa:—The uncertainty of seed-setting is the greatest risk attending the alfalfa seed-growing industry in Alberta. The literature covering the subject of sterility has been extensively reviewed, and cytological studies are under way to secure intimate knowledge of the normal processes involved in the setting of seed. It is hoped later to examine the effect of environment on these processes in different strains of alfalfa.

Survey of Native Grasses—During the past summer some work on this project was done in the Edmonton district and in the Grande Prairie-Beaver Lodge district. Co-operative arrangements have been made with the Dominion experimental farms branch for the surveying of the latter area.

Wheat Studies—In our plant biochemical laboratory we are now studying wheat from four angles: winter hardiness, drought hardiness, rust resistance, and quality of grain in relation to environmental factors. The studies on the nature of rust resistance were begun only this fall, thus completing this important program, which it is thought may be profitably followed for a period of ten years. Substantial help for this work is being received from the research council of Canada. The introductory paper of a projected series on "Wheat quality and environment" was published in *Scientific Agriculture*, September, 1925. Material for papers on other phases of the wheat program is available in abundance, and will be prepared for publication as soon as possible.

Miscellaneous Projects—Investigations are being continued on various other projects outlined in last year's report, viz., plant succession in slough land, hulling studies with timothy seed, biochemical methods of estimating the vitality of seeds. A further report on these projects will be made next year.



CRAIGIEVAR AGAIN—170011—Pure bred Shorthorn steer, bred by Wm. Sharp, Lacombe, Alberta. Second in Junior Yearling class at Royal Agricultural Show, Toronto, 1925. Grand Champion steer at Calgary and Edmonton Spring Shows, 1925. Fed and exhibited by the University of Alberta, Edmonton, Alberta.

DEPARTMENT OF ANIMAL HUSBANDRY.

Through the generosity of the W. C. Macdonald Registered of Montreal, it was possible to again send a livestock judging team to compete at the Royal Agricultural Winter Fair at Toronto. Only two teams from western universities entered the competition this year. The team from Alberta was eleven points behind the

winning team from Manitoba. The value of this competition is more apparent each year. It offers an opportunity to students interested in live stock to visit this important show and in addition it has had the effect of stimulating more interest in livestock judging amongst our students.

Steer Exhibit—In co-operation with a number of the breeders of beef cattle in the Province the fifth exhibit of market steers was made this year at the Royal Agricultural Show at Toronto and the International Livestock Exposition at Chicago. The object of this move, when first started some years ago, was to demonstrate in a practical way the possibilities of Alberta as a breeding ground for high class livestock. The interest displayed in this exhibit each year, together with the consistent winnings that have been made, are without doubt accomplishing this purpose. Another very pleasing feature has developed in connection with this work. It has resulted in an increased interest on the part of the breeders of the Province in the work of the institution, not only in respect to the market steer exhibit but it applies as well to the work of the university in general.

This year for the first time an exhibit of horses was made at the Royal Show in Toronto. A three-year-old Belgian mare and a two-year-old Clydesdale filly made up this year's entry from this institution. A second place in the Belgian class and fifth in a strong class of twenty-one Clydesdale two-year-olds was the result of this year's showing.

Assistance was received from the Alberta Provincial Government and the Federal Livestock Branch, Ottawa, in connection with this year's exhibit. They co-operated in paying the freight charges. The support that has been received from the breeders in Alberta, together with that of the Provincial and Dominion governments is very much appreciated, and has been a big factor in making it possible to send this exhibit east year after year.

Feeders Day—This event is now an established feature at this institution in connection with giving publicity to the experimental work. It is held early in April, at the time the winter feeding trials are completed, which gives those who attend an opportunity of inspecting the various groups of animals that have been used in the tests. In no better way can the results of such work be brought to the attention of those interested. This year the weather conditions were such that it was impossible to carry out the usual program in full. In spite of this, however, there was a good attendance and the reports on all the work were presented.

Experimental Work—Livestock experimental work is one of the major activities of the department of animal husbandry. This work is being extended each year in so far as time, facilities and finances will permit. This seems justified in view of the fact that Alberta is essentially a livestock Province and general conditions in Alberta are somewhat different from those in other parts of Canada. It is therefore, essential that data should be available based on experiments conducted under conditions as they prevail in this Province.

Beef Cattle Experiments—Between 75 and 100 feeder steers are purchased in the fall and fed during the winter for the purpose of securing information on the various factors concerned in profitable steer feeding.

Two years' work is now completed on the following subjects:

1. *The Value of Silage for Finishing Steers*—This has shown that silage has an important place in the ration. It has resulted in increased gains and a higher finish as compared with rations where silage was not fed.

2. *The Economy of Feeding Linseed Oil Meal*—Two years' work indicated that steers fed one-half pound of linseed oil meal daily in addition to a meal ration made up of two parts barley and one part oats has shown a value of approximately \$90.00 per ton for this protein supplement. The relative prices of farm grown grains and linseed oil meal is a big factor in determining its value as a feed for finishing steers.

3. *Full Feed Grain Compared with Limiting the Amount to Two-thirds*—While the gains obtained on the steers receiving the lesser amount of grain were somewhat less and they did not obtain such a desired finish as those receiving a full feed and consequently sold for slightly less per pound, the cost of gain on the other hand was made more economically. In years of high priced grain particularly, the policy of feeding less grain and more roughage may be well worth while considering.

4. *Value of Alfalfa Hay for Finishing Steers*—A comparison has been made with oat hay and alfalfa hay during the past two winters. Oat hay has proven only 71% as valuable as alfalfa as a roughage for finishing steers. Another feature in connection with the results obtained with the use of alfalfa hay is that the finishing of steers offers a profitable medium through which to market this crop.

This winter's work will complete these different trials with each of the four experiments mentioned. It is expected that the full report on these projects will be published next year.

Work with two new problems in connection with finishing cattle was started this year. One with the object of determining the relative merits of stees and heifers in the feed lot. The other is to ascertain the value of minerals in cattle feeding.

Dairy Cattle Experiments—This year for the first time experimental work was started with dairy cattle. The work now in progress includes a comparison of oat hay and alfalfa hay as a roughage for dairy cattle, with particular reference to the value of alfalfa hay in supplying protein in the ration for dairy cows. The relative efficiency of oat silage and sunflower silage for milk production is also being studied.

Swine Experiments—Experiments with swine during the past year were largely in the nature of a continuation of projects started in previous years. These include the following:

(a) Comparisons of such pasture crops as rape, cereal mixture, oats and fall rye, alfalfa, sweet clover, and sunflowers.

(b) The effect of feed and method of feeding on the type of hog and quality of carcass produced.

(c) A determination of the value of mineral mixtures, both simple and complex for pigs under pasture conditions and for winter fed pigs.

(d) Comparison of the various rations and methods of feeding weanling pigs.

(e) Comparison of various protein supplements and combinations of supplements for fall pigs.

(f) Cost of production and profits in fall pig raising.

(g) The value of potassium iodide in the ration of the pregnant sow as well as in the ration of the growing pig.

Twenty-seven groups of pigs were on experiment during the past summer, and eleven groups of fall pigs will be on test during the present winter.

Three years' work has been completed in connection with some of the above mentioned projects, including the effect of various rations and method of feeding on the ultimate type of hog and quality of carcass produced and certain phases of the forage crop work. Reviews of this work with conclusions will form the basis for two or three interesting bulletins during the coming year.

Sheep Experiments—Experiments have been conducted during the past year on the following projects:

1. Rations for pregnant ewes.
2. Fattening lamb rations.
3. Breeding ewe lambs.
4. Pasture comparisons.

Some of these trials have been in progress now for a few years and considerable data has been accumulated. Upon the completion of this work information should be available which will be the basis for one or more publications.

BREEDING STOCK.

Horses—Two of the older farm horses were disposed of this fall, which means that all of the work horses maintained are pure-bred. Including the three horses kept for saddle and driving purposes, there are now twenty-two horses, made up as follows: eight Percherons, six Belgians, five Clydesdales, and three grades.

Beef Cattle—Representatives of three beef breeds are kept at the university farm. This includes twenty-four Shorthorns, eight Herefords and seven Aberdeen-Angus. In order to strengthen the Angus herd three females with calves at foot were purchased during the summer from T. Henderson & Son, Lacombe. In point of both quality and number, the herd is stronger at present than at any time since it was first established. With one exception, every animal of breeding age in the beef herd is now a regular breeder, which indicates the fact that the trouble experienced the past few years with contagious abortion is practically cleaned up.

The pure-bred steer herd at present numbers approximately twenty head, comprising the three beef breeds, made up principally of calves that have been donated during the past eighteen months. Included also in the beef cattle should be mentioned the grade steers now on experiment, numbering about 80 head.

Dairy Cattle—There has been a general improvement in the health of the dairy herd during the past year which has resulted in a more satisfactory milk yield, as well as an increase in the number of calves born.

Several of the inferior cows were sold and replaced by four well bred animals purchased from W. C. Houck of Chippewa, Ontario. The bringing in of the Jemina and Bess Burke blood through those cows should mean a decided improvement in the production and type of the dairy herd.

A 22,354 pound milk and 1,020 pound butter record was made by the Holstein cow, Sady Mutual DeKol, whose progeny is becoming widely disseminated in this Province. Several other good records of 15,000 to 18,000 pounds of milk were made. A number of bulls were sold during the present year to go into dairy herds throughout the Province.

The herd now numbers thirty-eight, made up of twenty-seven Holsteins and eleven Jerseys. Very little increase is possible in the dairy cattle until provision is made for a new dairy barn. In view of the fact that Ayrshires should be represented in the herd as soon as possible, it is hoped that accommodation for a larger herd will soon be available.

Sheep—Five breeds of sheep—Hampshires, Shropshires, Ox-fords, Suffolks and Leicesters—are included in the pure-bred flock. These are used for class material for our students and at the same time the increase each year makes available a considerable number of breeding animals for distribution throughout the Province. The sale of pure-bred breeding stock, both rams and ewes, is increasing from year to year. The present season over forty head of high class individuals were sold at a reasonable price. The Shropshire flock was strengthened this year by the purchase of four ewe lambs, together with an outstanding ram. Approximately 120 head of pure bred sheep now go to make up the flock.

In order to carry on experimental work a flock of about 110 grade ewes were kept. Sheep of any kind have been a good investment during the past few years and this flock has, in addition to providing facilities for conducting sheep feeding trials, returned a good revenue in the way of lambs and wool.

Swine—Approximately fifty sows farrowed during the spring of 1925 and a similar number are being bred for farrowing in the spring of 1926. The past season has been a very satisfactory one from the point of view of swine production, both as regards rate and economy of gains, as well as market conditions. Even pigs of June farrowing have been marketed early in December. Capital and current sales for the year will total over the nine thousand dollar mark.

The Tamworth and Berkshire breeds predominate in point of numbers, but the representation of Yorkshires has been increased as a result of the farrowing of a number of 1924 gilts during the past spring and fall. Next year more Yorkshire sows than Berkshires will be in active service. During the year a very promising young Yorkshire boar has been purchased from the Manitoba Agricultural College. Eight Duroc-Jersey sows and a boar constitute the herd of this breed, while Poland-Chinas are represented by two yearling sows. During the year a considerable numbr of gilts and young boars have been distributed among the farmers of the Province.



For two years in succession Agriculture has won the Interfaculty Debating Trophy. From left to right: J. A. Anderson and E. W. Brunsdon made up the team, Harold Philips was coach.

The Farm—The university farm is not large, with the result that no attempt is made to produce grain crops for threshing. Practically all the land is required to provide pasture and to grow silage crops. In addition to this, more or less green feed is grown each year. For the past few years the subdivision known as Windsor Park has been worked on shares.

The 1925 crop on the university farm was quite up to the usual good yield and while some difficulty was experienced in harvesting some of the latter crop, due to weather conditions, which resulted in lowering the quality, there is available for winter feeding considerable home grown roughage.

During the present year the south farm was connected up with the city water main. Previous to this all the water necessary for live stock kept on this farm during the summer had to be hauled. This extension will mean not only greater convenience, but will be a considerable saving in farm operating expenses.

The fences enclosing the hog runs opposite the main piggery were in such a condition that it was necessary to completely renew them this year. Since the completion of this work in November, the farm is well equipped to take care of the large breeding herd of hogs during the winter.

EXTENSION WORK.

The College of Agriculture is concerned in the following activities:

1. *Correspondence*:—This work is becoming increasingly heavy. It is a splendid means of establishing contact with our people on the farm so we endeavor to give very prompt attention to our correspondence. It is manifest that a certain amount of this correspondence becomes routine in its nature, and to meet the situation the extension department of the university has added another member to its staff who, as part of his duty, looks after this question and answer work.

2. *Radio*:—During the past year by arrangement with the broadcasting station C.J.C.A. each Monday night was recognized as agriculture night, and some member of our staff gave an address through this station upon some subject connected with his particular department. This season the department of extension at the university has installed a microphone which is connected with the Journal station, and the service has been doubled, in that two addresses are given each Monday night instead of one. We have every reason to believe that this work is deeply appreciated, and is no doubt partly responsible for the tremendous increase in our correspondence, as just mentioned.

3. *Individual Meetings*:—The Department of extension arranges a series of meetings to be addressed by members of our staff. In addition to these there are many meetings furnished with speakers by request, either on the part of a U.F.A. local or some other organization, or at the request of the provincial department of agriculture. It should be pointed out that most of these meetings come during the part of the year that the college is in session and this is given an explanation why we cannot possibly do any more of this sort of work than we are now doing, without increasing the staff. It would not be fair to our students to take our teachers away more frequently.

4. *Short Courses*:—These are arranged by the provincial department of agriculture which has always offered us this additional means of reaching the farmer where he lives. We are receiving a good many requests for a short course at the university, and it is probable that this matter will have to be arranged for in the near future.

5. *Publications*:—There are a number of publications issued by the agricultural publications committee, and distributed by our extension department, and by the department of agriculture. Again it may not be out of place to point out that these publications are really definite reports of our investigational work, written in readable form. The demand has been very widespread—we do not attempt to send these publications out wholesale, but for the large part only upon request. We are in receipt of many requests for our publications every day.

Respectfully submitted,

E. A. HOWES,

Dean.

Report of the School of Agriculture, Olds

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I am submitting the following report of the Olds School of Agriculture for the year 1925.

STAFF.

The following are now on the staff at the Olds School of Agriculture; F. S. Grisdale, B.S.A., principal; G. R. Holeton, B.Sc., mechanics; C. A. Weir, B.S.A., animal husbandry; E. L. Churchill, B.A., M.A., mathematics; A. T. Kemp, B.S.A., botany and horticulture; R. E. Stewart, B.A., M.A., English and civics; C. E. Yauch, B.S.A., science; C. H. H. Sweetapple, V.S., veterinary science; L. H. H. Foster, B.S.A., dairying; F. H. Budgeon, practical mechanics; Miss M. Edwards, B.S.A., sewing; Miss B. Edgar, B.H.Ec., cooking; Miss M. Kocher, R.N., nursing. The last five named and Messrs. Stewart and Yauch are new to the O.S.A. staff. I feel that the present staff is very capable and their work on the whole is most satisfactory. Mr. E. E. Eisenhauer, B.S.A., B.Sc., has spent a period of two months teaching surveying and irrigation at the O.S.A.

ENROLMENT.

Seventeen hundred and sixty-six students have enrolled at this school since it opened in the fall of 1913. The registration this year is 194, the largest on record. The increase in the attendance is accounted for in part by the 21 Hoadley men. The enrolment without including these men is well above the average for the past twelve years. It shows that there is a good healthy development taking place in so far as the attendance is concerned.

PRIZES AND SCHOLARSHIPS.

Each year there are a number of very handsome prizes and scholarships donated in various competitions at the O.S.A. These prizes are donated by friends and supporters of the O.S.A. and the school is deeply indebted to the donors for the generous assistance they render in this connection. Last year's prizes and winners are as follows:

P. Burns' prize for practical work in agriculture to First Year men:—

1st prize—Preston McDonald, Mirror.

2nd prize—Fred Bennett, Lathom.

3rd prize—Alex. Hutchinson, Duhamel.

P. Burns' prize for practical work in agriculture to Second Year men:

- 1st prize—Emerson McKee, Benalto.
- 2nd prize—Wm. Cram, North Edmonton.
- 3rd prize—Donald McGregor, Abee.

P. Burns' prize for practical work in domestic science to First Year women:

- 1st prize—Florence Rushfeldt, Vulcan.
- 2nd prize—Luella Hogan, Oyen.
- 3rd prize—Gertrude Strachota, Killam.

P. Burns' prize for practical work in domestic science to Second Year women:

- 1st prize—Isabel McNaughton, Rumsey.
- 2nd prize—Muriel Welsh, Olds.
- 3rd prize—Anna Vetter, Carstairs.

Best Graduation Dress:

- 1st prize—Alma Adler.
- 2nd prize—Agnes Heie, Kingman.

Best Set of Lingerie:

- 1st prize—Florence Rushfeldt, Vulcan.
- 2nd prize—Luella Hogan, Oyen.

Meal Serving Competition:

- 1st prize—Muriel Welsh, Olds.
- 2nd prize—Josephine Storrow, Killam.

The Leland Phillips Poland China Gilt donated for the best all round stock judging in second year was won by E. J. McKee, Benalto.

The C. A. Weir medal for the best judging work in sheep and horses by S. Murray, Olds.

Special prize for the most marked progress in English donated by E. L. Churchill was won by Stanley Switzer, Lacombe.

O.S.A. prize for general proficiency in first year agriculture went to Erin McAllister, Eldorena.

United Grain Growers' prize for general proficiency in first year domestic science was won by Helen J. Garrow, Brooks.

Second year men—Gold Medal—for first year man standing highest in general proficiency—Erin McAllister, Eldorena.

STUDENT ORGANIZATIONS.

We have as one of the senior organizations "The Students' Council." This is an organization of representatives from the various classes in the school and are elected for the purpose of providing a student self-governing body. The council is responsible to the principal, but in a large measure it controls the conduct of student affairs both inside and outside the school. The Students' Council also handles collection of fees for the student societies and deals with the administration of general student business.

The Literary Society in this school is one that is looked upon as being of very great value. It arranges for the weekly program which is staged every Friday afternoon. These programs include: debates, addresses, and some musical selections. This committee also arranges for a weekly paper "The Chinook," to be read at the meeting.

The Magazine Committee at the school has prepared again this year a splendid magazine. This is one of a number of very valuable assets that we have as a part of our institution. A high valuation is placed on the magazine because it provides a history of our year's work in a medium that not only records the life and activity of the students and staff of the O.S.A., but also supplies a fund of information and entertainment for all who read it. Moreover, it gives each year to quite a number of students a very valuable training in executive and editorial lines.

The Athletic Committee is the one organization in the school that makes provision for the physical development of the members of the student body. This student organization deals with the management of the rink for both skating and hockey. It is responsible for supervised sports such as boxing and wrestling. It stages very successful tournaments in these lines of sport, and in very many other ways renders valuable service to the student body and incidentally to the O.S.A.

HOME ECONOMICS.

The subjects in the home economics course have been moderately modified during the last four or five years. The changes that have been made in the course were for the purpose of strengthening the practical lines of training. The greatest improvement that we have been able to make has had to do with the providing of dormitory accommodation for the women students. We now have under the government supervision well equipped dormitories which are modern in every respect.

AGRICULTURE COURSE.

In the agricultural course very little change has taken place during the last number of years. We begin lectures at 8.30 in the morning instead of at 9 o'clock, as was the case during the first eleven years of the school's history. Beginning a half hour earlier in the morning and continuing for fifteen minutes after twelve o'clock makes provision for running an extra period each forenoon. This additional time that has been added to our school day is used for English and mathematics. It allows for additional training in these subjects without interfering with the carrying out of the instruction in the practical subjects of the course.

The greatest need that we have at the O.S.A. at the present time is for dormitory accommodation for the students. This accommodation has been provided in a fairly satisfactory manner for the domestic science students, but we are not able to make the same sort of arrangement for the men who are in attendance. In the past three years it has been very difficult to get suitable living accommodation for all of the students, and it is due to this fact that some of the students are unable to settle down and enjoy the course and the life at the O.S.A.

ALUMNI AND EXPERIMENTAL UNION ASSOCIATIONS.

The Alumni and Experimental Union Associations are controlled by ex-students. They are very active associations and are closely allied with the school. The school values the work these societies are doing. It is felt that they keep the school in close contact with many of the ex-students and makes it possible for the graduates to derive benefits from their alma mater which is otherwise impossible. The organizations have over two hundred paid up members. They meet at the O.S.A. in January and again in July and have large numbers in attendance on both these occasions.

MEMORIAL.

In honor of those who gave their lives in the Great War the Alumni Association has purchased a memorial in the form of a clock set in bronze slab. This is to be erected in the school and is to bear the names of the men of the O.S.A. who gave their lives in the world war. The memorial has cost \$350.00. It will be unveiled at the time of the summer reunion in July.

EXTENSION LIBRARY.

In the spring of 1925 the idea of a co-operative students' and ex-students' library at the Olds School of Agriculture was brought before the literary committee for their consideration. The library was to contain a general class of literature, including: natural science, philosophy, fine arts, useful arts, fiction, history, sociology, etc. The literary committee received the plan with favor and founded the library by appointing a committee to put the plan into effect, and making a cash appropriation for the first books. The student body officially supported the plan and made a substantial donation through the students' council. One hundred and fifty-six (156) volumes were purchased and put into circulation on July 17th, 1925.

The Alumni Association continued the work begun by the students and donated sufficient money to put 1,000 books on the shelves by December 31st, 1925.

The Dewey-Decimal system of classification was used from the beginning and has proven quite satisfactory. Shelf files and a dictionary catalogue were installed. Shelf accommodation was provided in the reading room of the O.S.A.

Since opening the library the following features have been added:

- a. An information file in conjunction with periodicals and newspapers received by the school.
- b. An extension mail service to farmers in Alberta whether ex-students of the Olds School of Agriculture or not.
- c. Special bulletin service to farmers.
- d. Travelling libraries to Rural Schools.

Books are sent to any point in the Province in travelling libraries of three. These may be kept one month or exchanged oftener if desired. The demand is practically always greater than the available supply.

The library has been practically self-supporting, funds received from students, ex-students and a membership fee of one dollar from outsiders being the principal sources of revenue. Donations to the extent of over \$500 have been made to the library by outsiders in addition to the money given by students.

Early in 1926 it was decided that the work being done was of sufficient value that some measures should be taken to insure continuity of the services being performed. To this end the committee and present members reorganized as the Olds School of Agriculture Extension Library Association, incorporating under the Societies Act, Chapter 11, Statutes of Alberta.

At present there are 1,400 volumes in circulation. One hundred and thirty-five (135) parcels of books have been mailed to farmers in various parts of the Province. The circulation has grown from 46 volumes per month in July and August, 1925, to over 1,000 volumes per month in January, 1926.

Students of the school use the library extensively for reference material. The section on Canadian history deserving special mention. The project is a splendid demonstration of what may be accomplished by co-operation. The work of administration has been carried on by students almost entirely, under the supervision of a staff member of the library committee. Up to date practically no books have been lost.

	Volumes in Library	Volumes Circulated
July	156	28
August	206	46
September	403	79
October	510	141
November	718	308
December	865	450
January	1085	1014
February	1393	1023

Officers of the O.S.A. Extension Library Association are:

Honorary Presidents: H. A. Craig, Deputy Minister of Agriculture, Edmonton, Alberta.

H. M. Tory, President, University of Alberta, Edmonton, Alta.

President: C. A. Weir.

Vice-President: R. E. Stewart.

Secretary-Treasurer: E. L. Churchill.

Librarian: E. L. Churchill.

Advisory Board—Two to four members:

F. S. Grisdale, Mrs. E. Willson, F. Stevens, H. Higginbotham.

Directorate—Four to eight members:

Mrs. Geo. Peattie, Mrs. A. C. Bury, F. Bennett, A. T. Kemp, J. W. Robertson, Dr. C. C. Hartman, E. W. Brunsden.

SCHOOL FAIRS.

School fair work in the Olds territory has become well established and the people of the districts taking part in the work have come to fully appreciate its value and importance. The nature of the work serves to arouse in the young people a desire for further education in Agriculture and Domestic Science and many of these young people later find their way to the agricultural schools. Opportunity is afforded through the school fairs for representatives of the agricultural schools to meet prospective students and their parents and the large attendance at the Olds school is to a considerable extent due to this fact.

The various fairs are successful in proportion to the attention and energy which the local leaders give to the work. The teaching staff at the school of agriculture devote practically their whole time from April 1st to October 15th to the different phases of school fair work. They arrange and distribute the seeds; send out circulars and mounting material; act as judges at the school fairs and have charge of the school fair short courses held at the O.S.A. during May and June. The staff visits the rural schools with the idea of arousing and stimulating interest in the fair work by giving brief talks on the importance of agricultural training to the young farmers and in discussing and demonstrating the best methods of preparing exhibits.

At various times requests are made by persons in unorganized districts for meetings to awaken interest in school fairs. The requests are always met when possible, and through the use of moving pictures and talks the desired results are usually attained.

Occasional complaints regarding dishonest exhibiting come to our attention. We believe that the only way to check this is by education. Pupils must be made to see the evil effect on themselves as well as the creating of ill feeling which often results in disorganizing the fair. Every opportunity is taken to warn pupils and parents against the evils of dishonesty.

During 1925 a total of 34 fairs were held, taking in 341 schools. The number of pupils taking seeds was 6,074. The total number of exhibits was 26,767. The estimated total attendance at fairs was 10,000.

Fairs were held at the following points: Airdrie, Asker, Bulwark, Carbon, Carstairs, Castor, Cereal, Clive, Cochrane, Coronation, Dalroy, Delburne, Dog Pound, Eckville, Elnora, Fleet, Huxley, Innisfail, Lacombe, Leslieville, Mayton, Markerville, Millet, New Norway, Olds, Red Deer, Scollard, Sedalia, Springwater, Stettler, Sundre, Sylvan Lake, Talbot, Three Hills.

BOYS' AND GIRLS' SCHOLARSHIP SHORT COURSES.

To the boy and girl obtaining the greatest number of prizes at the school fair, the government gives a free scholarship short course at the O.S.A. for a period of one week. Besides being an incentive to greater effort in connection with school fair work it gives a boy and girl from each school fair district an opportunity of getting personally acquainted with the school of agriculture and the staff, and to get first hand information as to what scientific agriculture really means and they can take the ideas they have acquired while at the O.S.A. back to the farms with them.

Two short courses were held at Olds during 1925. During the week of July 6-11 the winning pupils from Vermilion, Sedge-wick and Edmonton districts took the course. There were 40 girls and 40 boys, who were under the care of Mr. H. W. Scott, Sedge-wick, who assisted in the short course at the O.S.A.

The second course was held July 20-25 inclusive for the winners of the Olds district. There were 33 girls and 33 boys in attendance.

Every effort is made to make the course profitable and interesting. Pupils are housed and fed at the school and are under constant supervision. They are kept so busy with classes, games and entertainment that no time is afforded for getting into trouble.

The short course is open to pupils eleven years of age or over. Only one from a family can attend in any one year and a pupil can only attend once. A boy and girl are chosen from each fair centre on the number of awards obtained.

SWINE CLUB.

During 1925 but one swine club was handled from the Olds school. This was a new Yorkshire club organized in and around Olds.

Because of the fact that many of the twenty members of the club had already suitable pure bred and feeding pigs at home, only 33 feeders and 8 pure bred gilts were purchased and distributed.

Owing to the postponement of the Olds school fair and the very inclement weather in which it was held, no local exhibition of the swine was held. Nor was a whole car lot ready for shipment for the swine club show at Edmonton in November. Half a car was shipped however, and combined with a half car lot from Red Deer to form a load. This combined load took seventh place in the competition.

A judging team accompanied the shipment (consisting of four members) and made a very creditable showing.

Owing to good hog prices each individual member did very well financially and all are satisfied with the actual returns from their investment.

BEES.

It will be recalled that our last report stated that two severe hail storms in 1924 resulted in a very small reserve of honey being stored for winter use. This necessitated winter and spring feeding. Of those wintered inside all came through in fairly good condition, while the four wintered in outside quarters came out stronger with the exception of one which had been stifled due to mice blocking the entrance. The season for bees in the district was none too satisfactory owing to climatic conditions. The flow of honey stopped abruptly on July 26th owing to hot dry weather at that time, later, when rains came, it was impossible except for brief periods for the bees to work. This condition, with cool weather later in the season, prevented the nectar being gathered resulting in low yields. From four hives we extracted 132 pounds of honey or an average of 33 pounds per hive.

Experiments are being continued on the wintering of bees. This year we are hoping to import other strains, some of which may prove hardier and more suitable to our climatic conditions. This phase of the work we deem very important as the results obtained so far seem to indicate a vast difference in strains.

Of the hives wintered, four are in a winter case outside and show indications of coming out stronger than those inside. This is believed to be due to the comparatively mild winter and naturally warm conditions of the cellar resulting in considerable activities of the bees, and abnormal consumption of food.

A very agreeable feature in connection with the work on bees is the increased interest of the farmers, as evidenced by the number of visitors, phone calls, and letters asking about bee culture.

THE SEASON OF 1925.

The season of 1925 was a fairly favorable one from the standpoint of crop production. During the early part of the season the weather was dry and growth in some localities was checked. Towards the end of June a good rain was received and better growing conditions prevailed from then until the end of the crop season. The harvest opened early in August and by the end of that month a very large part of the grain was in the stook. By the 10th of September a good percentage of the grain was ready for the thrasher and many farmers were making preparations to begin operations. Unfavorable weather conditions occurred at this time and for a period of a month no threshing of any extent was attempted. The grain that was threshed graded damp and unnecessary losses were experienced in storage and marketing. The weather improved in the latter part of October and better threshing conditions prevailed. However, many threshed too soon after the weather settled, thinking it might not last and not wishing to take a chance on having the grain in the stook during the winter.

The net result of the wet weather while the grain was in the stook and the threshing of the grain before it was properly cured was a loss in quality of possibly two grades and a heavy dockage to cover excessive moisture.

The year 1925 was nevertheless a profitable one for most farmers in Central Alberta. The yields and prices were above the average and there is a feeling that the farmer is getting a fair share of what he is entitled to.

Nineteen-twenty-five proved to be a favorable crop season on the school farm. Oats and barley were the only cereals grown. They yielded well, the best crop being a 24 acre field of Banner oats that produced 2,750 bushels, or practically 115 bushels per acre. 6,900 bushels of oats in total were threshed from 76 acres and 1,600 bushels of barley from 27 acres.

Hay crops yielded quite well, nearly 60 acres being in hay. This hay was all made up of sweet clover and grass mixtures with the exception of one field which was in its second year and which consequently had little clover left. One first year field seeded to a mixture of 4 lbs. of timothy, 4 lbs. of Western rye grass and 4 lbs. of sweet clover per acre, yielded a little heavier than one and one-half tons per acre.

Corn and sunflowers were seeded on one field, taking the place of summerfallow. The corn was a moderate crop, having been backward in growth in the early summer, but the sunflowers were an excellent crop. These were seeded in checked rows and well cultivated, the field being clean as an ordinary summerfallow when harvested.

Threshing was late, owing to the very unfavorable fall weather but the entire crop was threshed finally in moderately good condition.

The following table gives the rainfall at Olds for the past twelve years:

PRECIPITATION RECORDS.

Month	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	Monthly Average
January .....	.....	0.49	0.75	0.60	1.16	0.75	2.05	0.60	0.35	0.65	0.70	0.65	0.88
February .....	.....	0.66	0.30	0.20	0.25	0.42	0.95	0.30	0.65	1.60	0.32	1.65	0.73
March .....	.....	0.85	0.60	1.00	0.15	0.05	1.95	1.46	0.25	0.35	1.10	1.75	0.86
April	0.29	1.00	0.60	0.75	0.18	1.02	1.63	2.10	2.31	1.29	2.57	1.19	1.24
May	0.92	4.27	5.49	4.86	2.40	1.71	1.40	0.78	0.66	5.37	1.25	1.20	2.61
June	3.49	8.09	4.53	4.88	0.76	0.96	0.48	1.57	1.28	5.56	2.02	2.50	2.76
July	1.29	7.04	4.61	0.86	0.95	1.36	3.25	4.39	1.66	2.46	5.07	2.30	2.93
August	0.58	2.50	8.56	2.44	2.46	4.43	0.62	1.82	3.88	4.23	3.88	3.27	3.22
September ...	1.49	1.25	1.50	2.14	0.69	1.43	0.72	0.67	0.90	1.00	0.42	3.58	1.31
October	1.50	0.73	0.93	0.31	0.50	1.05	1.53	0.02	0.60	0.00	0.75	1.04	0.75
November	1.70	0.52	0.80	0.65	0.05	1.37	0.20	1.17	0.25	0.01	0.37	0.38	0.62
December ...	1.90	0.02	0.90	0.50	0.50	0.59	0.30	0.05	0.65	0.10	1.60	1.10	0.68
Total	13.16	27.42	29.57	16.19	10.05	15.14	15.08	14.93	13.44	22.62	20.05	20.61	18.61

DATES OF FIRST SEEDING AT OLDS, 1914 TO 1925.

Years	Dates
1914	April 17th
1915	April 3rd
1916	
1917	May 5th (approximately)
1918	April 12th
1919	April 8th
1920	May 15th
1921	April 27th
1922	April 22nd
1923	April 13th
1924	May 3rd
1925	April 17th

EXPERIMENTAL FIELD WORK.

As a result of the field experiments with farm crops it is now possible for this school to supply information of a fairly definite character on the question of crops and cropping. This information is accumulating as a result of the fairly elaborate lines of investigational work that have been under way for the past seven or eight years.

There are considerably over two thousand experimental plots at the O.S.A. each year. There is a complete set of experiments devoted to rotation work; another complete set devoted to culture work; then there is an extensive line of variety tests of cereals, grasses, forage, roots, potatoes, vegetable crops, and flowers and shrubs. A large amount of selection work is also done for the purpose of maintaining purity and high yielding qualities of standard varieties. A number of new varieties of many kinds of crops are introduced each year from all over America and from a number of places in Europe. These are tested out with standard varieties. Some of them have proven to be most promising. The results from the experimental work becomes more valuable as the number of years that the experiments are done increases, and because of this a considerable amount of very valuable data is now available in our records.

HORTICULTURE.

The work in the horticulture department is making progress at the O.S.A. Such development is necessary if the work at this station is to lead in this line. People now realize that the home surroundings have been neglected during the past in rural districts. The interest in the development of attractive and homelike grounds is not confined to the setting out of shrubs and trees and the laying down of a lawn, but is also manifest in the desire many have to make provision for a permanent garden in which small fruits are included. Knowing that definite knowledge on these matters was needed in the rural districts, the O.S.A. has made an effort to be in a position to give information and assistance to those who require it, believing that the matter of improving home surroundings was worthy of encouragement. As a result of the work we have

done with home beautifying and gardening at the O.S.A. there is a considerable amount of valuable information available for those who desire. Further the results of the work that has been done with small fruits show conclusively that a small fruit plantation would be a very profitable and valuable addition to any farmer's garden.

HORSES.

The horses on the farm are kept almost wholly as working stock. There are thirteen head on the place at the present time. They are, with one or two exceptions, good draft types, and are strong, healthy useful horses, several being really high class horses.

Although no horse breeding had been done on the farm for four years previously, two mares were bred in 1924 to a good Clydesdale horse owned by Mr. J. Hagerty. One of these mares aborted in the early spring, losing a fine pair of twin foals. The other mare raised a very creditable filly foal. This mare was bred again to the same horse.

Because of the special class of British immigrants at the school, and the necessity for giving them considerable practical horse work, six head of horses have been kept in this winter. The remainder, however, are wintering on the stubble fields and around the straw piles and are in excellent condition.

CATTLE.

The Shorthorn herd on the school farm has had a successful year and is in excellent condition this winter. In the spring a number of cows and calves that had comprised the herd at the Raymond school were shipped to this point. At the close of the pasture season the herd was culled quite heavily and a number of the poorer specimens sold, three very fat cows having been sold in the spring as well.

Three good young bulls were consigned to the bull sale held in Calgary in May and brought fair prices.

In the fall six Guernseys, three cows and three heifers were added to the herd, the basis for a small dairy herd that will be built up at this point.

The calf crop for the year has been good, but, owing to the relatively low price of bulls for the past two years, none but the best bull calves are being retained. The remainder have been steered and are being fed as baby beef.

The herd bull, Princeton Benefactor, is still being retained. He has sired many deep, straight roan calves, several of the heifers, especially, being very desirable.

Seventeen steers and four calves were purchased in the fall and are being fattened during the winter months.

SWINE.

Forty-eight spring pigs were raised on the farm during 1925. These were with three exceptions, pure bred Yorkshires. Four of these have been retained in the breeding herd and five gilts and one boar sold for breeding purposes. Of the remainder that were sold on the market—thirteen graded as select bacon, and six as improved hogs. Most of the remainder would have taken the latter grade, but were marketed before that grade became effective on the market. Since the pigs sold and retained for breeding purposes were undoubtedly selects, fifty percent of the hogs raised were select.

One sow farrowed in the late summer and two in September. These young pigs are being carried on as rapidly as possible.

Five aged and four young Yorkshire sows and two Berkshire sows are being carried over winter, and are bred to farrow in March and April. The four young Yorkshires are a particularly choice lot of sows, and have been bred to a particularly typey boar. Especially good prizes may be looked for from this mating.

Two boars are being kept over winter, the old herd boar having sired such good pigs that it was thought advisable to retain him.

The swine are all housed in portable cabins. These, heavily banked with straw and well bedded, make excellent winter quarters for swine. The herd being free from any rheumatism or stiffness.

SHEEP.

A small flock of Shropshire ewes is kept on the farm. Thirteen ewes and ten ewe lambs being in the flock at the start of the year. One ewe proved not to be in lamb, but from the remainder sixteen lambs were raised, a total of twenty lambs being born in all. Two of the lambs lost were apparently born dead, the other two being third lambs from triplets.

Three ram lambs were sold in the fall to breeders.

The flock ram, because of the excellence of his lambs has been retained with the older ewes, and a ram lamb purchased for the shearing ewes. Twenty-four ewes in all were bred in the fall.

Respectfully submitted,

F. S. GRISDALE,

Principal.

Report of School of Agriculture, Claresholm

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I have the honour to submit the following report of the Claresholm School of Agriculture for the year 1925.

Few changes have occurred in the personnel of the permanent staff during the past year. The resignation of E. L. Gray, B.S.A., on October 1st, from the position of instructor in animal husbandry and farm manager, was much regretted. He was succeeded on November 1st, by W. M. Cockburn, B.S.A., formerly district representative at Barrie, Ont. Two additions to our temporary staff were made at the beginning of the fall term in the persons of John G. Clark and J. W. Howe, B.S.A. Mr. Clark was placed in charge of the farm work for the British boys during their five months' course. Mr. Howe was responsible for instruction in dairying with all classes. Otherwise the school staff remains unchanged.

ENROLMENT.

The total enrolment of this school since its establishment in 1913, is 1,015, of which 725 were men and 290 women.

The enrolment for the fall term of 1925 was as follows:

First Year (Agriculture).....	24
Second Year (Agriculture).....	22
British Boys' Class.....	24
First Year (Home Economics).....	16
Second Year (Home Economics).....	10
Special students.....	1
Total	97

This registration is an increase of fourteen over that of the previous year. The number of boys in the regular classes was considerably below that of 1924. This is accounted for by the unusual fall weather conditions which delayed threshing operations and prevented the attendance of many who had planned to enter. Inquiries and applications during August and early September indicated a much stronger attendance than usual of our farm boys. When winter weather commenced about September 10th receipt of applications from boys almost ceased. Enrolment of boys on opening day, October 27th, was therefore, somewhat disappointing. The increase in attendance over 1924 is accounted for by the larger classes in the home economics courses, and the new class of British boys.

PRIZES, MEDALS, ETC.

1. For planning and furnishing best home—Prizes donated by Miss M. Hall:
1st Silver Medal—Jessie Salmon, Claresholm.
2nd Bronze Medal—Jean Miller, Maybutt.
2. For Meal Serving Competition, open to students of 1925 graduating class—
Prizes donated by Miss C. MacIntyre and the Principal:
1st Cash \$7.00—Jean Miller, Maybutt.
2nd Cash \$5.00—Alice Pelletier, Pincher Creek.
3rd Cash \$3.00—Artence Champney, Orton.
3. For Best Sets of Lingerie made by First Year students—Prizes donated by Miss M. Hall:
1st Cash \$3.00—Hazel Sillito, Orton.
2nd Cash \$2.00—Bird McCarthy, Twin Butte.
4. For General Proficiency in the First Year of the Home Economics Course—
Prize donated by the Calgary Herald:
Winner—Laura Tolley, Orton.
5. For General Proficiency in the First Year of the Agricultural Course—
Prize donated by the Calgary Herald:
Winner—O. N. Askew, Nobleford.
6. For Public Speaking Contest, open to all students—Medals donated by Mr. W. S. Benn:
1st Silver Medal—C. W. Duplessis, Edmonton.
2nd Bronze Medal—Miss Bird McCarthy, Twin Butte.
7. For Best Bushel Hard Spring Wheat—Prizes donated by the School:
1st, 4 bus. 2nd Generation Registered Marquis—L. W. Bateman, Vulcan.
2nd, 2 bus. 2nd Generation Registered Marquis—C. C. Keller, Cayley.
8. For Best Bushel Oats—Prizes donated by the School:
1st, 2 bus. Registered 1st Gen. Victory Oats—C. C. Keller, Cayley.
9. Silver Medal donated by Mr. E. L. Gray, to the student of the Second Year with highest standing in Livestock during his two-year course:
Winner—G. R. Miller, Claresholm.
10. Highest standing in Veterinary Science, open to students of the Second Year—
Prize donated by Dr. C. E. Buchanan:
Winner—J. A. Taylor, Cayley.
11. For Weed Collection (including collection of seeds), open to graduating class of 1925:
1st, Cash prize of \$5.00—C. C. Keller, Cayley.
12. For Best Projects in Woodwork, open to Second Year students—Prizes donated by Mr. W. J. Welker:
1st, C. C. Keller, Cayley.
2nd, Ward Simpson, Bassano.
13. Essay on "The Value of Mixed Farming Over Special Grain Farming Based on Actual Information Obtained from the Experience of Farmers in Southern Alberta."—Prizes donated by Lethbridge Herald:
1st, Cash Prize of \$15.00—C. C. Keller, Cayley.
2nd, No essays of sufficient merit.
14. For General Proficiency in all subjects of the Second Year Course, open to both Agriculture and Home Economics students:
Winner—G. R. Miller, Claresholm.

STUDENT ACTIVITIES.

Student Council—The council has continued to give good service in promoting the business ventures of the student body, and has assisted the principal and staff in the maintenance of order and discipline at the school. This organization gives the students opportunity for the exercise of self government to a reasonable extent.

Athletic Association—The weather during the fall term was unusually mild and dry, giving opportunity for outdoor activity in athletics. A field day was held on the afternoon of November 18th and included events for both the girls and the boys. Every event was keenly contested. Bird McCarthy of Twin Butte, carried off the honors in the girls' section, while Glenn Hansen of Aetna, was champion of the boys' events. Ribbons, school pennants and crests were awarded as prizes.

The British boys' soccer team played a number of matches with the town team and won a majority of its games. The basketball team also demonstrated its prowess by winning all of its games. Hockey, boxing and wrestling are also included in the athletics programme.

Literary Society—This society has special charge of social, literary and musical activities. With the fall term some new methods were introduced, and these have increased the effectiveness of the society in providing entertainment of a high order. Literary meetings are held regularly every Saturday evening. The programmes have been so interesting and entertaining that every student is eager to be present. A special new feature of these meetings is the reading of the weekly school paper, "The C.S.A. Tatler" which relates the latest school news and all the amusing incidents and scandal of the week. Each second year student is scheduled to appear in debate at one of the literary meetings during the year as a part of his regular course in public speaking.

The Glee Club—Under the direction of Mr. Benn, a Glee Club was organized to promote community singing and to discover and develop latent musical talent. The glee club choruses add zest to the literary meetings. This club is now preparing a minstrel show to be presented during the winter term.

Orchestra—A school orchestra of five pieces: piano, violin, saxophone, banjo and drums, provided music for the Saturday evening dance following the literary meeting and for other school functions.

Year Book—The year book for 1925 was well up to the standard of excellence of former years. It is a big financial undertaking for a student body of our numbers. Both the editorial and business staffs worked hard to make it a success and deserve credit for the fine results of their efforts.

ALUMNI ASSOCIATION.

Two meetings were held during the year, one on January 5th for election of officers and to plan the year's business, and a summer meeting on August 7th. Both of these days were advertised as re-unions and special programmes were prepared with the usual ex-students' dance in the evening.

I regret to report that the attendance of ex-students on these occasions was not very encouraging. There are a very few who take an active interest in the association's business, but most of the ex-student body of this school are apparently indifferent. This is causing me some concern, since an enthusiastic alumni is a big asset to a school and means much to its future progress. I shall give this matter special consideration during the next year.

SPECIAL COURSE FOR BRITISH BOYS.

Twenty-four British boys arrived at the Claresholm school on October 22nd for a course of training in agriculture by arrangement between the Overseas Settlement Board of the British government, and the government of this Province. These boys proceeded to Claresholm under conditions somewhat different from those affecting similar classes at the other schools of agriculture. Each boy was granted a scholarship of £50 by the Fellowship of the British Empire Exhibition, which pays his passage and incidental expenses while at the school. The majority of this class are dependent on their own efforts for their living and have entered into the work of their course with eagerness to learn as much as possible before being sent out to Alberta farms in the spring.

The practical work and classes for the British boys are arranged as follows: each boy works all day on the farm and at the stables one day each week. There will therefore be four boys for all day duty each day. The remainder of the class is divided into two divisions. One division reports at 8 o'clock each morning of the week for chores and work until 9.30 o'clock. The other division reports for chores at 4.30 p.m. and work until 6 o'clock. This arrangement is reversed each week. Both divisions attend regular classes in the more practical farm subjects, such as animal husbandry, field husbandry, horticulture, etc., between 9.30 a.m. and 4.30 p.m. We have found this programme to work out very well. Most of the boys prefer the work on the farm and at the stables, to the classroom work. They are developing fast at milking, driving horses, handling farm tools, and general work about the place, and most of them should be sufficiently proficient in this work by spring to give good service to farmers employing them. Much of our success with this class is due to the advice and experience of Mr. John G. Clark who is supervising their practical work. We have profited by Mr. Clark's experience with a similar class at the Vermilion school during the term of 1924-25.

The association between the British boys and our own boys and girls of Alberta, has been of mutual interest and benefit. The British boys quickly adjusted themselves to our school life and have developed a class spirit and an enthusiasm in the school, equal to that of the other classes.

I regret to report that one member of this class, Clarence Long, was ill when he arrived at Claresholm. He was sent to the hospital where his case was diagnosed as "sleeping sickness." He was discharged from the hospital late in December, but was suddenly stricken again early in the New Year. Though everything possible was done for this boy, his death occurred on January 21st, 1926.

DEPARTMENT OF HOME ECONOMICS.

Another increase in attendance of girls for the home economics course is recorded with the opening of school in October, sixteen registering in first year and ten in the second year.

The annual exhibition of cooking and sewing was held in the school assembly hall on March 10th. It was well attended by the ladies of Claresholm and a large number were present from country points and neighboring towns. Afternoon tea was served for which a small charge was made, the proceeds being used to assist in defraying the expenses of the graduation banquet. The exhibit was a tribute to the excellent instruction given by the home economics staff. A view of the sewing exhibit appears in the school calendar for 1925-26.

The large house belonging to Mr. T. D. Lewis was again rented as a girls' dormitory. It provides pleasant residence accommodation for the girls at a reasonable rate.

Throughout the spring and summer, the home economics teachers assisted in the organization of school fairs, and acted as judges at these fairs in September and October. They spent a part of the summer giving instruction at short courses in connection with Women's Institutes, in central and southern parts of the Province.

HORTICULTURE.

A larger selection of both flowers and vegetables was grown in 1925. Flowers in particular illustrate what may be done under dry land conditions, making, as they did, a particularly fine showing. Over 200 feet of large main beds were laid down with annuals largely predominant. The perennials wintered well except a few which were in exposed locations and lacked sufficient top dressing. Heretofore but little work has been done with winter hardy bulbs. In order to make a start in this direction, a bed containing a large number of hardy lilies and tulips was set out in the fall and should make a good showing in 1926.

Trees made a good showing. Unfortunately the heavy snow in the fall, coming before the leaves were shed, broke down a number of the larger branches. This will damage the general symmetry of some of the older trees. Fortunately none of the fruit trees were large enough to be injured in this way. None of the apples, plums or cherries fruited, although some blossoms were produced. The flowers were all knocked off by a heavy hail storm on June 6th. This storm also hit the strawberries and other small fruits very hard, for instead of the indicated heavy yields, only light production occurred.

Garden stuff came along in good shape although being set back by the hail. Many newly transplanted plants had to be re-set entirely. Growth was better than in 1924 with all the standard garden crops. Harvesting was exceedingly difficult, everything being snowed under for a time. In spite of being lifted when wet, all roots are keeping well in storage.

FIELD HUSBANDRY.

The season 1925 opened with the precipitation in March and April above the average. While providing a suitable start for the crops it delayed seeding which was not commenced on the plots until April 30th. Rainfall during the growing months, May to August inclusive, was 8.820 inches, this being .224 inches less than the average during the last ten-year period. The frost free period was 124 days, the last spring frost being on May 17, (32°), and the first fall frost occurring September 17th, (32°).

On June 6th a heavy hailstorm occurred, but did not do much damage excepting to the fall rye and sweet clover. The yields of these crops were reduced considerably. Throughout the season growth was good until just previous to cutting time when a hot period accelerated ripening unduly. All grains came along before they were expected. All plots seemed to ripen at once. The effect of this too rapid ripening was noticeable in a light weight per bushel and a general lack of plumpness in the wheat and oat crops. Wheat ran about 4 lbs. less per bushel when compared with 1924. Fine weather held through the harvest. Threshing of the variety test plots was just completed when further threshing was held up for over a month by extremely bad weather commencing September 5th. Before threshing was finally completed over five and a half inches of precipitation fell, half of this as snow which at one time was 14 inches deep on the level. This prolonged wet weather caused a large amount of injury to all unthreshed crops in the district. It provides, however, a large supply of moisture for the 1926 cropping season as the year's precipitation was increased over the previous ten year average by 2.705 inches.

Work with winter wheats was increased by the addition of rod row tests of 28 varieties to be conducted in co-operation with the U.S. Department of Agriculture in an effort to determine which varieties are most winter hardy. A number of other varieties have now been tested for three years. On the average

we find the Macdonald College selection No. 22 of Kharkov, to be the heaviest yielder over the period, exceeding any other variety by over four bushels and the old standard variety Alberta Red, by sixteen bushels. The difference is largely due to the superior winter hardiness of the Karkov strain. Several hundred acres of this strain is being grown in Southern Alberta at present. It has the disadvantage of appearing somewhat starchy in some seasons.

Certified seed potato work was continued, all varieties passing field inspection with one exception which had too high a percentage of mosaic present. All varieties yielded well with but a small percentage of non-marketable tubers. A limited amount of work with registered grain was also done.

A number of improvements in field plot management methods were started. The number of replicates was increased and a simpler system of plot numbering was used throughout. The number of border rows on all plots in the experimental area now equals 1,588, made up as follows:

1-50 acre plots	258
1-100 acre plots	810
1-200 acre plots	315
Rod rows	200
Large multiplication blocks	5
Total	1588

The main work at the station consists of cereal variety testing, cultural and rotational tests. Work with sunflowers and roots was reduced. Sweet clover and other hay crop tests were increased. The number of corn varieties and strains were cut down in order to allow more thorough testing by means of a larger number of replications. With but few exceptions, yields are excellent throughout.

DEMONSTRATION FARM.

Although we had a somewhat drier summer in the Claresholm district in 1925, the demonstration farm equalled the 1924 production of grain, dry fodder, corn and sweet clover for silage. The various farm products were approximately as follows: Wheat, 2,200 bushels; oats, 2,900 bushels; barley, 1,500 bushels; 61 tons of dry roughage consisting of corn fodder, green feed, sweet clover silage. The sweet clover was pastured for some time in the spring, then allowed to grow up, producing a crop of hay in August. The trench silo alone will provide abundance of succulent roughage to carry the stock till after the first of March, leaving the stave silo to be fed out in the spring and summer.

In our crop rotation, summerfallow has been abandoned, making use of corn instead as a cultivated crop. By returning a large quantity of manure to the fields, and by growing considerable sweet clover, we have been able to increase the organic matter in the soil to bind the soil particles together. This and the keeping

of the land under crop has practically eliminated soil drifting on the farm, aided very largely by the wind breaks of Russian Poplar established on the south and west sides of the farm in 1922.

As we were fortunate enough to have our threshing done before the early snowfall in the autumn, there has been even a keener demand for seed from the farm than usual. The available supply of seed wheat which we have was practically all spoken for by New Year's.

During the year a herd of Ayrshires was established on the farm in addition to the Herefords and Aberdeen-Angus. Our Dairy herd now consists of sixteen head of pure-bred Ayrshires, including a herd sire, and two grade cows transferred from the Vermilion demonstration farm. Five of the cows are entered in the R.O.P. test and the remainder of the cows, during the winter months, are being used to train the British boys who are taking the special course, how to milk. The dairy cows are being fed a ration of corn silage, alfalfa meal and a grain mixture of oats, barley, bran and oil meal.

The beef herds are but slightly changed from last year except for natural increase which has enabled us to cull out some inferior heifers. At present we have fifteen pure-bred Herefords, twelve pure-bred Aberdeen-Angus and four grade Angus steers which are being used by Dr. Talbot, provincial veterinarian, for experimental work in connection with vaccine for the prevention of bovine tuberculosis. All female calves dropped are being inoculated with the Calmette vaccine. Last spring we contributed one Hereford and one Aberdeen-Angus bull to the Calgary bull sale in April.

There were no horses bred during the past season. The horses, numbering twelve, are being carried through the winter on a maintenance ration of corn fodder and oat straw. The idle horses run out all day and are stabled at night.

During the fall we reduced the size of our flock of Shropshire sheep by culling out a number of old ewes and some of rather poor type. The flock now consists of 15 mature ewes, 1 ram and 8 ewe lambs. Twenty lambs were raised by 13 ewes. The male lambs were castrated and sold in November for mutton.

Our present herd of swine is made up of 1 pure-bred Berkshire boar, 5 Berkshire sows, 2 Yorkshire sows, 1 Tamworth sow, and 42 hogs of varying ages. In the course of the year 58 head of hogs were disposed of. Of the four fall litters dropped, two were farrowed in September and two in November, and up to date we have had good luck with all but one litter dropped by a poor mother.

PRECIPITATION.

The meteorological records for 1925 at Claresholm show a total precipitation of 18.532 inches. This is almost three inches in excess of the average for the ten previous years and slightly over four inches greater than for 1924. This excess of precipitation

had no influence upon the crops of the district since the greater part of the increase occurred during September and October. There was rather more rainfall during the month of June than usual, but July fell considerably below the average for that month and the grain crops matured rather too quickly as a consequence. The rainfall of August, which occurred from 14th to 16th, came too late to be of general benefit. The following table shows the average precipitation at Claresholm for the ten years, from 1915 to 1924 inclusive, and gives figures for the last two years.

Month	Average		
	1915 to 1924	1924	1925
January .....	.480	.93	.312
February .....	.683	1.13	.225
March .....	.765	1.68	1.61
April .....	.903	.64	1.40
May	2.061	.35	1.26
June	2.949	3.46	4.095
July	2.175	.795	1.41
August	1.859	3.055	2.055
September	2.017	.915	4.435
October .....	.815	.315	1.355
November .....	.547	.15	.20
December .....	.573	.95	.175
Total	15.827	14.34	18.532

BEE KEEPING.

A few colonies of bees have been kept since the summer of 1923 to determine the possibilities of bee keeping in this district.

Ten colonies were placed in winter quarters, November 1st, 1924. They were packed in cut straw in cases of rough lumber, 16'x4'x3', with a lid full length, five colonies being placed in each case. This case for wintering was found to be less convenient for spring handling than the square, four-hive case, in which the hives are placed back to back.

It was impossible to open up the hives in February for winter feeding on account of the severe weather. Late in March the colonies were examined. Two very weak colonies were dead, not being strong enough to generate sufficient heat to survive the winter. Two others were reduced in strength to the point of being almost useless. Four colonies were very strong and in excellent shape. The remaining two were somewhat below average strength. The weakness of such a big percentage of the colonies is traceable to the lack of swarm control measures during the previous summer.

It was decided to reduce the apiary to five colonies in good working condition. One strong colony was sold and the two very weak ones were retained only for observation. These failed to gain in strength at any time during the season and were used in September to strengthen two colonies that were below normal. Honey production was therefore confined to five working colonies. The maximum production for extraction for the average colony

in this district in a favorable season is about 75 pounds. Weather conditions of the past summer were not ideal, the early part of the season being cold, and high winds later on reducing the working efficiency of the bees. A total of 220 pounds of honey was extracted, being an average of 44 pounds per colony. This is a fairly satisfactory production when weather conditions and strength of colonies is considered.

Until this season glass sealers had been used as honey containers. It was found to be less expensive and more convenient to use tin pails. All extracted honey was put up in five pound pails and sold locally. The demand was far in excess of supply.

Swarming was controlled by examining the colonies every ten days and destroying the queen cells. As a result, not a single case of swarming occurred.

Late in August all colonies were requeened with queens secured from the Dominion Experimental Farm, Lethbridge. It will be interesting to note the influence of these young queens next season.

In order to determine the period of strongest honey flow, our strongest colony was placed on a scales on May 24th and daily record of weights made throughout the season up to September 7th. Some interesting data was obtained and is summarized in the table below. It will be noted that the only period when honey was produced in any large quantity was between June 21st and July 18th. Gains and losses preceding and following this period are almost negligible. The actual honey producing season for this season was therefore limited in length. The greatest daily gain was made on July 15th, when 13½ pounds were produced. This compares favorably with the strongest daily production in other districts. This experiment should be repeated over several seasons to find the limits of variation, both in total production for the seasons and period of strongest flow.

SUMMARY OF HONEY FLOW, 1925.

Dates	Weight gained	Weight lost	No. of days	Av. gain per day	Av. loss per day
May 24-June 1	.....	3 lbs. 15 oz.	7	.....	9 oz.
June 1-June 4	1 lb. 4 oz.	.....	3	6.6 oz.	.....
June 4-June 21	.....	4 lbs. 4 oz.	17	.....	4 oz.
June 21-July 18	76 lbs. 5 oz.	.....	27	2 lbs. 13.2 oz.	.....
July 18-July 26	.....	5 lbs. 6 oz.	8	.....	10.7 oz.
July 26-Aug. 5	6 lbs. 12 oz.	.....	10	10.8 oz.	.....
Aug. 5-Sept. 7	Weights fluctuated only slightly.				

Experience at this school in the past three seasons has demonstrated that bee keeping in this district as a commercial proposition is doubtful. Early summer climatic conditions are uncertain, the varieties of honey flowers are limited in number, and the bees must carry their honey too great a distance in many localities. In the irrigated areas, such as the Lethbridge district, conditions are

altogether different. Alfalfa and sweet clover are grown extensively under irrigation and commercial bee keeping is likely to be more successful. An increase in these crops in the Claresholm area would probably result in higher production.

This school is indebted to Mr. Sylvan Hillerud, a beekeeper in the Claresholm district, for his assistance in carrying on the experiments in beekeeping during 1925.

BLACKLEG VACCINE.

The sale of Blackleg vaccine was continued in 1925. This is supplied to farmers at cost price. The demand was much heavier during the last year than in 1924. Total doses sold in 1925 was 1,132 as compared with 475 in the previous year.

BUILDINGS AND EQUIPMENT.

The main building, carpenter shop and field husbandry building were repainted, which improved their appearance greatly. A small amount of interior redecorating was done, the library and wash rooms being done over and floors of corridors varnished. A bathtub was installed in the ladies' wash room. The ventilation system at the blacksmith shop was remodelled and repaired. All of this work was done through the Department of Public Works.

Much of the interior of the main building is badly in need of redecorating and the same applies to the judging pavilion and the field husbandry laboratory. The principal's house and all of the farm buildings need repainting. We are badly in need of floor space for gas engines and demonstration machinery. The course in engines and machinery cannot be given satisfactorily until we have sufficient room to accommodate the equipment and classes.

SCHOOL FAIR SHORT COURSE.

A scholarship short course of one week at the Claresholm school, was awarded by the department to the boy and the girl of each school fair centre, who scored the highest number of points at the 1924 school fair. This course was held July 6th to 11th, with fifty-six boys and girls in attendance.

The main school building was used as a residence with the boys' dormitory on the first floor, girls' dormitory on the second floor, and kitchen and dining room in the basement. From 6.30 a.m. to "lights out" at 10.00 p.m., each day was crowded with classes, games and entertainment. A "field day" for both boys and girls was held and all events were strongly contested. On Friday evening, a number of the citizens of Claresholm kindly donated their cars for a drive around the country after which a garden party was held on the lawn, and the evening's entertainment came to a close with the presentation of ribbons and school pennants won in the field day events.

All of the boys and girls reported having had a splendid week. Two students of this class returned in October and entered the first year of the regular course. Every year we have a number of ex-short course students entering for the regular course.

SCHOOL FAIRS.

On account of early rains and snowfall during September and October, all but six fairs were held under most unfavorable weather conditions. Two fairs had to be cancelled. Notwithstanding these conditions the fairs generally were very successful.

The interest of the older people in the districts is becoming more manifest from year to year, new and attractive features are being added each year, due largely to the fact that teachers and the communities generally are studying more carefully the needs of the various districts, and these are being systematically added to the standard prize list. Activities of this nature are sure to make the fairs more permanent and more useful to the various communities.

Fairs were re-established at High River, Cayley and Gleichen, and new fairs at Langdon, Arrowwood and Carseland are in process of organization for 1926. None of the fairs organized fell down for other reasons than bad weather.

During the months of May and June active supervision of the work was carried on by Mr. Welker and Miss Hall in the Raymond district, and Mr. Benn and Miss McIntyre in the Claresholm and Gleichen districts. As many schools as possible were visited by the supervisors and helpful talks were given in the work of preparing and exhibiting in the various features of school fair work.

The attendance of adults and children exceeded considerably, that of former years. Thirty-two fairs were held in the three districts with a total attendance of approximately 6,000 children, 4,000 adults and an entry list totalling over 23,000.

Respectfully submitted,

S. H. GANDIER,
Principal.

Report of the School of Agriculture, Vermilion

H. A. CRAIG,

Deputy Minister of Agriculture.

SIR,—

I beg leave herewith to submit a report for the Vermilion School of Agriculture and Demonstration Farm. We laid before you an earlier report covering the opening of the school to the British boys, and that was followed with three progress reports during the year, but the following is the first full year report and includes the mention of the reopening of the school to Canadian students.

BRITISH BOYS.

As is already well known, the Province of Alberta, through the Minister of Agriculture, has inaugurated a system by which British boys, of about high school age, are brought out to one of the schools of agriculture in the Province of Alberta for a five months' training course in agriculture. These boys are then placed out on selected farms as hired help.

The general outline of the course has already been reported upon and need not be repeated here.

Before the course closed for the British boys last spring we had secured enough positions on farms to provide for all who wished to take up that work. As a matter of fact, we could have provided places for at least 25 more. Of the original 64 students who came to Vermilion 12 did not wish to go on with farm work at the conclusion of their course, and during the summer and fall others left their positions, but a careful check in January, 1926, revealed the fact that 34 boys were still on their farms and were apparently doing well. One of the boys has just written us that he has bought a farm near Busby, another expects to return from Ireland in the spring with his bride, and we expect he will purchase the farm on which he worked last year. Two or three others may rent farms, but the majority will continue to work as hired men for a year or two more before locating permanently.

It is interesting to note that the Alberta farmers seem to like this plan of securing dependable help, for, as has been noted above, nearly fifty per cent. more boys could have been placed than were available. This present year indicated somewhat the same condition, for practically all this group of twenty-three are now placed (March 1st) which is nearly a month before the course is scheduled to conclude.

SUMMER WORK.

After the school closed on March 25th, there was only Mr. Whitbread and the undersigned left at Vermilion.

Mr. Whitbread gave his attention to the demonstration farm, and the experimental plots, and the undersigned undertook the visiting of the British boys at work on farms, the building of a lawn fence and the putting of the lawn in shape. In addition we attempted to organize a pig club, but applications for pigs came in too late to get this under way.

THE DEMONSTRATION FARM.

This branch comes under Mr. Douglas, farm director, but the undersigned had the general supervision at this end with charge of the payroll and accounts. We feel that it will be unnecessary to give a detailed account of the operation of the farm, as Mr. Douglas will undoubtedly attend to that. But we would like to mention particularly what a valuable asset the farm is to the school of agriculture. With one of the best dairy Shorthorn herds in Canada, and as well some good grade Holstein and Ayrshire cows, good work horses, a superior flock of Oxford sheep, good Yorkshire and Tamworth hogs and a flock of poultry, we have a wonderful opportunity to give first class livestock instruction to all the boys attending the school. In addition to this, the farm with its varied activities gives us an opportunity for the right kind of practical training for the British boys. We believe that if the British boys can harness, hitch up and drive two to four horses, and milk two to four cows night and morning they will be useful hired men for Alberta farms.

THE EXPERIMENTAL PLOTS.

During 1925 Mr. Whitbread divided his time between the demonstration farm and the plots, consequently considerable of this work had to be delegated to the teamster, who has done this work for a number of years.

Two ranges were planted, and our idea of last year was simply to run variety tests, largely for classroom work. The majority of the experimental area was summerfallowed, so that it will be clean for such work as may be undertaken in 1926.

BUSH AND SMALL FRUITS.

This section of the work also comes under the supervision of Mr. Whitbread. A good start has been made with currants, raspberries, and gooseberries. A small patch of strawberries has been started, and some work has been done with fruit trees. Some of the hardy crabapples, and a few apple, cherry and plum trees have been planted. It is too early to report on these. We also have a considerable tree nursery and have several hundred home-grown Russian poplars, and several rows of white spruce and pine that will later be used on the lawn.

SCHOOL FAIRS.

This work constituted one of our main efforts during 1925, as some thirteen fairs were held, and most of them were very successful. The seeds and supplies were received in ample time so that they could be sent out promptly to the schools asking for same.

One new school fair was added to our list and arrangements were finally made for fairs as follows:

Merton	Sept. 2	Norway Valley	Sept. 15
Ranfurly	Sept. 4	St. Paul	Sept. 16
Vermilion	Sept. 9	Ashmont	Sept. 17
Islay	Sept. 10	Vilna	Sept. 18
Mannville	Sept. 11	Bellis	Sept. 19
Landonville	Sept. 14	Innisfree	Sept. 22

Minburn was the only fair that did not materialize, due to a failure on the part of some schools to furnish their promised grant. We have already given special attention to Minburn, and feel assured that point will hold a fair again in 1926.

Our experience with school fairs in this district indicates one decided need, and that is that every individual school should be visited by a representative of the school of agriculture. We believe that this has not been done for about five years, and we believe that this would stimulate an interest on the part of both teacher and pupil, that would be felt in the holding of better fairs.

This year we have already been in touch with every school fair secretary, and many districts are laying plans for the coming summer. We are working with School Inspector Williams of Vegreville, for new fairs at Boian Marie and Naughton Glen, and believe that something may also be done north of the river.

SCHOOL FAIR SHORT COURSES.

Last July we gathered the two winners in each school fair district, also the winners in Mr. Newcomb's district, and proceeded to Edmonton, where we met Mr. Foley with his group of winners, and all proceeded to Olds for the summer short course. Needless to say the boys and girls enjoyed this outing, and profited much by the week of work and play, which, according to their own report, ended all too soon.

Next July we are to entertain the pupils from Mr. Scott's, Mr. Foley's, Mr. Newcomb's and our own district at Vermilion. We have already been in touch with each district representative, and shall send a note to each boy and girl a little later, giving full particulars regarding the course, the journey and what necessary things to provide.

PIG AND CALF CLUBS.

With Mr. Andrew in charge of the demonstration farm, and coming with splendid experience from Ontario, we are anticipating a real revival along pig club lines at this point. Mr. Andrew and the undersigned attended a meeting of the Agricultural Society at Mannville on Friday evening, February 26th, and it is possible that they may do something toward organizing a pig club at that point, as they were much interested in the development of boys' and girls' work in the district, as a feeder for the ranks of the agricultural society.

VISITING BRITISH BOYS.

Considerable of the principal's time was taken up last summer in visiting the British boys who were working on farms, scattered over the entire district between Edmonton and Calgary. The placing of the boys was as follows:

On C.N.R. east of Edmonton: at Edmonton, Vegreville, Lavoy, Vermilion, and Lloydminster.

On G.T.P. east of Edmonton: at Holden, Viking, Irma, Fabyan and Edgerton.

On C.P.R. east of Wetaskiwin: at Camrose, Strome and Sedgewick.

On C. & E.: at Leduc, Millet, Lacombe, Innisfail, Olds, Carstairs and Calgary.

Around Lacombe: at Nugent, Rimbey, Bentley, Alix and Mirror.

Other places: at Big Valley, Galahad and Oyen.

It will thus be seen that they were widely scattered, but every home was personally selected as one that we knew or one recommended by someone whom we could depend upon. During the season we visited each boy once and had almost covered the list twice when the rain and snow prevented further work. Some special cases were visited three and four times. Our object being to see that the boy was getting and giving a square deal.

THE SCHOOL LAWN.

A considerable portion of the principal's time was also given to preparation of a lawn at the school of agriculture, which included the laying out of the grounds, the planting of trees and shrubs and the building of a suitable fence in front of the property. Considerable progress was made along this line, flower beds were prepared, and some 3,000 trees and shrubs were set out. During 1926 we expect to continue this work by laying out the grounds east of the farm manager's house. Considerable more trees, shrubs and flowers will be required for this work. These will be asked for at a later date.

THE OPENING OF THE VERMILION SCHOOL.

During the summer of 1925 the Minister of Agriculture, the Honorable George Hoadley, opened the Vermilion School of Agriculture for Canadian students (both boys and girls) as well as for British boys. Plans were laid for this and on the opening day we received a total registration of 92 students in the first year. These were divided as follows:

Canadian Girls	28
Canadian Boys	41
British Boys	23
Total	92

This we think is the largest class of girls enrolled at the school for some time, and we believe constitutes a record total enrolment for all students. Considerable interest centres in the fact that six of the girls and twelve of the Canadian boys are new Canadians, or Ukrainians from north of Vegreville, and it is interesting to note the meeting and mingling of the British, new Canadians, and Canadian boys and girls. The rubbing shoulder to shoulder in this course seems to be good for all.

THIS YEAR'S BRITISH BOYS.

Vermilion school received 23, or approximately one-third of the quota of British boys who came out in the fall. This year's class averages up about the same as last year's, that is, there are apparently about 60% who will make good, and of the balance a few may do better than we expect, but there are, to our way of thinking, too many coming forward who will make very doubtful hired help, if not absolutely unsuited to this work. We believe that three things should be insisted upon in making selections for this plan.

1. The boy should pass a physical, and, if at all doubtful, a mental test.
2. His bringing up, habits of life and previous occupation should all be carefully noted.
3. We should insist upon, at least, a month's work on a farm in the Old Country, so that the boy might prove himself, and that, before someone who is familiar with farm work in Canada.

THE STAFF.

The staff for the winter 1924-25 was a temporary one, so that a new staff, similar to that at the other schools, was engaged last fall.

The present staff is as follows:

W. J. Elliott, Principal and Instructor in Farm Management.
 B. J. Whitbread, Instructor in Agronomy.
 J. F. Andrew, Farm Manager and Instructor in Livestock.
 S. C. Heckbert, Instructor in Mechanics.
 W. R. Brown, Instructor in Science.
 W. G. Malahar, Instructor in English and Mathematics.
 Miss M. Alexander, Instructor in Sewing, Laundry and Textiles.
 Miss F. Edwards, Instructor in Cooking, Foods and Home Administration.
 Miss Murray, Special Instructor in Home Nursing.
 E. Cormack, Special Instructor in Dairying.
 Dr. Haworth, Special Instructor in Veterinary Science.
 Miss M. L. Rose, Stenographer.

We would be very remiss in our duty if we failed to express our very keen appreciation of the help and cordial assistance that we have received at the hands of the staff during the past winter. Never have we had a more agreeable or more obliging staff, and all seemed to desire to put on a course worthy of the school. Every member of the staff was willing to take an extra class, or assume any duty that was for the betterment of the course or the good of the students. With the class of students that we had it will be appreciated that many were very backward. Various members of the staff have conducted special classes, but we think especial mention should be made of Mr. Malaher, who has carried two and three extra classes per week in English and mathematics all winter, for a backward class of from eighteen to twenty students. We would also like to commend Mr. Heckbert who during the Christmas holidays and since that time, assisted very materially in starting our 1926 campaign in the interest of school fairs.

THE SCHOOL AND FARM ACCOUNTS.

There are six funds carried at the school, which add materially to the office routine. These funds are:

1. The Provincial Treasurer School of Agriculture Trust Fund.
2. The Provincial Treasurer Farm Trust Fund.
3. The Provincial Treasurer Farm Sales Account.
5. The Provincial Treasurer Dormitory Fund.
5. The Provincial Treasury School of Agriculture Caution Fund.

In addition a joint signature account is carried with each British boy, covering the £50 which he brought with him. These require detailed attention.

CORRESPONDENCE.

The regular correspondence of the school is increased considerably by correspondence with last year's British boys, who are still on farms, and in addition there is always a heavy correspondence necessary to secure suitable places for the current British boys' class. At the present writing we have all but a few of the boys placed.

Respectfully submitted,

W. J. ELLIOTT,
Principal.

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